INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

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MEMORANDUM

TO: EQSC members

FROM: Lori F. Kaplan, Commissioner

DATE: Sept. 3, 2003

RE: Follow-up from Aug. 12 EQSC meeting

During the last EQSC meeting, several of you had questions for further information regarding various parts of the presentation.

Attached is our attempt to address those questions. The information includes:

1. Further information on the Metropolitan Statistical Area boundary issue: how it is established and USEPA's guidance for how it is used in determining nonattainment boundaries.
2. Further information about the Idleaire diesel electrification project in Gary.
3. Ozone air quality data statewide showing three average eight hour ozone values from the 1995-97 period through the present.
4. Historical one hour ozone information for the monitors in Clark and Floyd Counties.
5. The current list of members of the Central Indiana Ozone Workgroup.

I hope this information is helpful. If you would like additional information, please do not hesitate to contact me or IDEM's director of Legislative Relations, Tonya Galbraith at 232-8598.

State Form 4336

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: August 19, 2003

To: Tonya Galbraith Thru: Janet McCabe

From: Kathy Watson, Branch Chief
OAQ

Subject: Use of Metropolitan Statistical Areas in Nonattainment Area Boundary Determinations

At the EQSC meeting on August 12, several questions were raised concerning the use of Metropolitan Statistical Areas (MSAs) as boundaries for ozone and fine particulate ($PM_{2.5}$) nonattainment designations. Senator Gard asked for some background information on the development of MSAs. The U.S Bureau of the Census provides the following information on its web site*:

> The United States Office of Management and Budget (OMB) defines metropolitan and micropolitan statistical areas according to published standards that are applied to Census Bureau data. The general concept of a metropolitan or micropolitan statistical area is that of a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. Currently defined metropolitan and micropolitan statistical areas are based on application of 2000 standards (which appeared in the *Federal Register* on December 27, 2000) to 2000 decennial census data. Current metropolitan and micropolitan statistical area definitions were announced by OMB effective June 6, 2003.
>
> Standard definitions of metropolitan areas were first issued in 1949 by the then Bureau of the Budget (predecessor of OMB), under the designation "standard metropolitan area" (SMA). The term was changed to "standard metropolitan statistical area" (SMSA) in 1959, and to "metropolitan statistical area" (MSA) in 1983. The term "metropolitan area" (MA) was adopted in 1990 and referred collectively to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). The term "core based statistical area" (CBSA) became effective in 2000 and refers collectively to metropolitan and micropolitan statistical areas.

* http://www.census.gov/population/www/estimates/aboutmetro.html

In addition, in the December 27, 2000 *Federal Register* notice defining metropolitan and micropolitan statistical areas, OMB discussed the concept and uses of MSAs as follows:

> The general concept of a Metropolitan Statistical Area or a Micropolitan Statistical Area is that of an area containing a recognized population nucleus and adjacent communities that have a high degree of integration with that nucleus. The purpose of the Standards for Defining Metropolitan and Micropolitan Statistical Areas is to provide nationally consistent definitions for collecting, tabulating, and publishing Federal statistics for a set of geographic areas. To this end, the Metropolitan Area concept has been successful as a statistical representation of the social and economic linkages between urban cores and outlying, integrated areas. This success is evident in the continued use and application of Metropolitan Area definitions across broad areas of data collection, presentation, and analysis. This success also is evident in the use of statistics for Metropolitan Areas to inform the debate and development of public policies and in the use of Metropolitan Area definitions to implement and administer a variety of nonstatistical Federal programs.

Senator Hume asked whether the use of MSAs is a requirement of the Clean Air Act. The Clean Air Act sets forth C/MSAs as the presumptive boundary for ozone nonattainment areas classified as serious, severe or extreme, but not for lower classifications of ozone nonattainment or for fine particulate. It is unlikely Indiana will have areas that are classified as serious, severe or extreme ozone nonattainment.

The presumptive boundary of the MSA for nonattainment areas is included in EPA guidance to the states on making nonattainment recommendations (see Memoranda of John Seitz, dated March28, 2000, and of Jeffrey Holmstead, dated April 1, 2003, attached). While the guidance is not binding on the states, it is likely that EPA will use the MSA as a starting point for their analysis of the nonattainment boundaries. The reason is that urban areas are associated with factors that contribute to both ozone and fine particulate pollution, such as population density, traffic and commuting patterns, and commercial development.

Please let me know if you have any further questions about this matter.

March 28, 2000

MEMORANDUM

SUBJECT: Boundary Guidance on Air Quality Designations for the 8-Hour Ozone National Ambient Air Quality Standards (NAAQS or Standard)

FROM: John S. Seitz, Director
Office of Air Quality Planning and Standards (MD-10)

TO: Air Directors, Regions I-X

The purpose of this memorandum is to provide guidance to State and local air pollution control agencies and Tribes (States and Tribes) on designating areas as attainment/unclassifiable[1] or nonattainment and the Environmental Protection Agency's (EPA's) views on the boundaries for nonattainment areas for the 8-hour ground-level ozone NAAQS.

Area designations to attainment/unclassifiable or nonattainment are required after promulgation of a new or revised NAAQS. The EPA promulgated a new 8-hour ozone NAAQS in July 1997 and is, therefore, obligated to designate all areas by July 2000 as established by the Clean Air Act (CAA or Act) and the Transportation Equity Act for the 21 Century (TEA-21).[2] On May 14, 1999, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision remanding, but not vacating, the 8-hour ozone standard. The court noted that EPA is required to designate areas for any new or revised NAAQS in accordance with §107(d)(1) of the Act. American Trucking Assoc. v. EPA, 175 F.3d 1027, 1047-48, on rehearing 195 F.3d 4 (D.C. Cir. 1999).

The process for designations following promulgation of a NAAQS is contained in §107(d)(1) of the Act. This section provides each State Governor an opportunity to recommend attainment/unclassifiable or nonattainment designations including appropriate boundaries to EPA and for EPA to make modifications to these designations and boundaries as it deems necessary. In June 1999, EPA requested that each State forward (or complete entering into the Aerometric Information Retrieval System data base) air quality data through 1998 and identify which

monitors were exceeding the 8-hour standard during the 1996-1998 time frame. The EPA is now requesting that each State Governor submit their designation recommendations and supporting

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[1]A designation to attainment/unclassifiable means that the area has sufficient data to determine that the area is meeting the 8-hour ozone NAAQS or that due to no data or insufficient data, EPA cannot make a determination.

[2]CAA §107(d)(1); TEA-21§6103(a).

documentation to the appropriate EPA Regional Office, to the attention of the Regional Administrator, by June 30, 2000. These recommendations should generally be based on States' 1997-1999 quality-assured, Federal reference or equivalent air quality monitoring data.

In accordance with the CAA, EPA will review the recommended designations and may make modifications as deemed necessary to a State's recommendation. If EPA determines that a modification to the recommendation is necessary, EPA will notify the State no later than 120 days prior to promulgating a designation, which will provide an opportunity for the State to demonstrate why EPA's modification is not appropriate. In the case where a State does not submit recommendations, EPA will promulgate the designation it deems appropriate. As described in the attachment, Tribal designation activities are covered under a different legal authority.

This memorandum provides EPA's current views on how boundaries should be determined for designations. This guidance is not binding on States, Tribes, the public, or EPA. Issues concerning nonattainment area boundaries will be addressed in actions to designate nonattainment and attainment/unclassifiable areas under §107 of the CAA. When EPA promulgates designations, those determinations will be binding on States, Tribes, the public, and EPA as a matter of law.

The attachment contains the guidance on determining boundaries. Questions on this guidance may be directed to Sharon Reinders at 919-541-5284. The Regional Offices should make this guidance available to their States and Tribes and, where appropriate, work closely with them to ensure they submit their area recommendations by June 30, 2000.

Attachment

cc: Deputy Regional Administrators, Regions I-X
Margo Oge, OTAQ

Attachment

8-HOUR OZONE NAAQS
GUIDANCE ON NONATTAINMENT DESIGNATIONS

1. Why is EPA issuing this guidance on 8-hour ozone NAAQS nonattainment designations?

States have requested that EPA provide guidance on the appropriate boundaries for areas that will be designated nonattainment for the 8-hour standard. The EPA provided initial guidance on designations in a June 1999 memorandum.[1] That memorandum noted that EPA would provide additional information on designations at a future date. This guidance on how to determine the appropriate boundaries for areas that will be designated nonattainment for the current 8-hour ozone NAAQS is intended to meet that commitment. In addition, in light of the court decision remanding the 8-hour standard to EPA, States have asked what the implications are if EPA issues a revised ozone standard in response to the court's remand.

On July 18, 1997, EPA issued the revised NAAQS for ozone (62 FR 38856). The new standard is 0.08 parts per million (ppm) averaged over 8-hours; this compares to the pre-existing NAAQS of 0.12 ppm averaged over 1 hour. This action triggered the requirement under §107 of the Act and §6103 of TEA-21 for EPA to designate areas as attainment/unclassifiable or nonattainment for the revised NAAQS. Under these statutory provisions, EPA is required to designate areas for the revised standard by July 2000.

On May 14, 1999, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision remanding, but not vacating, the 8-hour ozone standard. The court noted that EPA is required to designate areas for any new or revised NAAQS in accordance with §107(d)(1) of the Act. American Trucking Assoc. v. EPA, 175 F.3d 1027, 1047-48, on rehearing 195 F.3d 4 (D.C. Cir. 1999).

As provided in this guidance, EPA is planning to designate areas for the 8-hour ozone NAAQS promulgated in July 1997. If EPA promulgates a revised ozone NAAQS in response to a final unappealable court decision regarding the validity of the 8-hour standard, EPA would then be required to begin the designation process under §107 of the CAA for that revised ozone NAAQS. In such a case, EPA would issue guidance regarding designations for that revised NAAQS. At the time of promulgation of that revised NAAQS, EPA would establish, after an opportunity for public review, an appropriate transition scheme from the current 8-hour NAAQS to any revised NAAQS promulgated in response to the court's decision. Although this memorandum is not establishing the transition scheme, EPA does not anticipate requiring States or Tribes to comply with the statutory redesignation requirements to modify the designations for the replaced NAAQS.

2. What are the underlying requirements for designating areas for the 8-hour ozone NAAQS?

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[1]Memorandum of June 25, 1999, from John S. Seitz, "Designations for the 8-Hour Ozone National Ambient Air Quality Standard."

There are two relevant statutory provisions governing designations for the 8-hour ozone NAAQS. Section 107(d)(1) of the Act establishes the requirements for making designations for areas when a NAAQS is promulgated or revised. These are designations of nonattainment or attainment/unclassifiable. The provision provides an opportunity for each State to make a recommendation to EPA concerning the designation of areas in the State within 1 year after promulgation of a new or revised NAAQS. The EPA is required to designate areas across the country no later than 2 years following the promulgation of the NAAQS. The TEA-21 §6103 essentially extends by 1 year the 2-year designation process. Thus, States were provided 2 years to make their recommendations and EPA is required to designate areas 1 year after the State designation recommendations are due.

As authorized by the Tribal Authority Rule (TAR), Tribes may request an opportunity to submit designation recommendations to EPA. In cases where Tribes do not make their own recommendations, then EPA, in consultation with the Tribes, will promulgate the designation it deems appropriate on their behalf.[2]

In issuing the final designations, EPA is authorized to make such modifications it deems necessary to the recommended designations of the areas or portions thereof including the

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[2]The CAA, §301(d), authorizes EPA to treat eligible Indian Tribes in the same manner as States. Pursuant to §301(d)(2), EPA promulgated regulations known as the "Tribal Authority Rule" on February 12, 1999 that specifies those provisions of the Act for which it is appropriate to treat Tribes as States. 63 FR 7254, codified at 40 Code of Federal Regulations (CFR) §49 (1999). Under the TAR, Tribes may choose to develop and implement their own CAA programs, but are not required to do so. The TAR also establishes procedures and criteria by which Tribes may request from EPA a determination of eligibility for such treatment. The designations process contained in §107(d)(1) of the Act is included among those provisions determined appropriate by EPA for treatment of Tribes in the same manner as States. Therefore, EPA Regional Offices will work with the Tribes in their Regions that request an opportunity to submit designation recommendations. Eligible Tribes may choose to submit their own recommendations and supporting documentation. Since, currently, there is a lack of air quality monitoring data nationally throughout Indian country, the factors identified in this guidance should be considered in recommending designations for the 8-hour ozone standard. The EPA will review the recommendations made by Tribes and may, in consultation with the Tribes, make modifications as deemed necessary. Under the TAR, Tribes generally are not subject to the same submission schedules imposed by the CAA on States. Therefore, EPA Regional Offices will work with their Tribes in scheduling interim activities and final designation actions, insofar as practicable, within the time frames outlined in this memorandum.

Finally, certain aspects of this guidance may not be particularly suited for application to Tribes due to circumstances that presently exist throughout Indian country. Consequently, EPA intends to issue additional guidance in the near future to further address designation issues pertaining to Tribes.

boundaries of the areas or portions thereof. If EPA modifies a designation or boundary, it must notify the State or Tribe at least 120 days in advance of such action in order to give the State or Tribe an opportunity to demonstrate why the proposed modification is inappropriate. The EPA's designation of areas for the 8-hour ozone NAAQS will be based on the most recent 3 consecutive years of air quality data from Federal reference or equivalent method monitors.[3]

Tribes are not required to recommend designations; however, they may choose to make recommended designations for land under their jurisdiction. The EPA will review the Tribe's recommendation, and may, in consultation with the Tribe, make modifications to the Tribe's recommendation. In cases where Tribes do not make their own recommendations, then EPA, upon consultation with the respective Tribe(s), will make designations for them.

3. How should boundaries of nonattainment areas be drawn and what process must be followed?

Section 107(d)(1) of the CAA addresses the determination of whether an area is to be designated nonattainment. With respect to a specific NAAQS, such as the 8-hour ozone NAAQS, this provision requires all areas to be designated nonattainment if they do not meet the standard or contribute to ambient air quality in a nearby area that does not meet the standard.

The EPA believes that any county with an ozone monitor showing a violation of the NAAQS and any nearby contributing area needs to be designated as nonattainment. In reducing ozone concentrations above the NAAQS, EPA believes it is best to consider controls on sources over a larger area due to the pervasive nature of ground level ozone and transport of ozone and its precursors. Thus, EPA recommends that the Metropolitan Statistical Area or the Consolidated Metropolitan Statistical Area (C/MSA) serve as the presumptive boundary for 8-hour NAAQS nonattainment areas.[4] We believe this approach will best ensure public health protection from the adverse effects of ozone pollution caused by population density, traffic and commuting patterns, commercial development, and area growth. In the past, areas within C/MSAs have generally experienced higher levels of ozone concentrations and ozone precursor emissions than areas not in C/MSAs. In addition, the 1990 Amendments to the CAA established the C/MSA as the presumptive boundary for ozone nonattainment areas classified as serious, severe and extreme.

4. How should designation recommendations, including boundaries, be addressed when more than one State and/or Tribe might be affected?

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[3]For the 8-hour ozone NAAQS, it is 3 consecutive years of data in accordance with 40 CFR part 50, Appendix I; data used will be quality-assured and meet 40 CFR part 58 requirements (e.g., for monitor siting). Designations should generally be made based on 1997-1999 air quality, considering data availability.

[4]C/MSAs are identified by the U.S. Bureau of the Census and can be found at the following website: http://www.census.gov/population/www/estimates/aboutmetro.html.

Where more than one State is involved with respect to an area, close coordination is needed among the affected States and Tribes prior to the time the recommendation is made. In addition, the EPA Regional Office should coordinate where an area may be located in States or tribal lands located in two or more regions. There is a strong presumption that interstate areas making up one C/MSA will be designated as one nonattainment area. The EPA believes that it is important that consistent and coordinated boundary recommendations be made for the area from each State and Tribe.

5. What factors should a State or Tribe consider in determining whether to recommend area boundaries that are larger or smaller than a C/MSA or tribal land?

In some cases, the most appropriate nonattainment area boundary may be larger than the C/MSA. For example, if sources located in a county or on Indian lands outside the C/MSA contribute to violations within the C/MSA, States or Tribes should consider whether it would be appropriate to expand the nonattainment area to include the area in which those sources are located. In other cases, a smaller nonattainment area may be more appropriate. For example, one C/MSA may cover multiple air basins, or include counties or portions of counties which are rural in nature.

A State or Tribe wishing to propose larger or smaller nonattainment area boundaries (including partial counties or portions of areas on tribal lands) than those matching the C/MSA or boundary of the tribal land should address how each of the following factors affect the drawing of nonattainment area boundaries and how the resulting recommendation is consistent with the definition of nonattainment in §107(d)(1) of the Act. Additional information is provided below under question number 12 on documentation.

- Emissions and air quality in adjacent areas (including adjacent C/MSAs)
- Population density and degree of urbanization including commercial development (significant difference from surrounding areas)
- Monitoring data representing ozone concentrations in local areas and larger areas (urban or regional scale)
- Location of emission sources (emission sources and nearby receptors should generally be included in the same nonattainment area)
- Traffic and commuting patterns
- Expected growth (including extent, pattern and rate of growth)
- Meteorology (weather/transport patterns)
- Geography/topography (mountain ranges or other air basin boundaries)
- Jurisdictional boundaries (e.g., counties, air districts, existing 1-hour nonattainment areas, Reservations, etc.)
- Level of control of emission sources
- Regional emission reductions (e.g., NOx SIP call or other enforceable regional strategies)

A State or Tribe choosing to propose area boundaries smaller than a C/MSA or tribal land should consult with its EPA Regional Office. The EPA will consider alternative boundary recommendations on a case-by-case basis to assess whether the recommendation is consistent with §107(d)(1) of the Act.

The EPA will issue guidance on factors for Tribes to consider when submitting designation recommendations. Some of the factors, particularly for areas throughout Indian country that may not have adequate or any air quality ozone monitors, are geographic location of the land, proximity to the nearest C/MSA, prevailing meteorology, location of nearby ozone monitors, available ozone air quality data, and location of nearby emission sources both inside and outside of such areas.

6. What are the key timing activities for and implications of designation as nonattainment under the 8-hour ozone standard particularly for States?

The designation process has several steps. On June 25, 1999, EPA issued a guidance memorandum requesting that States submit the most recent, complete, quality-assured ozone monitoring data identifying the monitors where exceedances of the 8-hour standard have occurred. The EPA, with this memorandum, is providing guidance describing the criteria for drawing boundaries for nonattainment areas and setting deadlines for the steps in the designation process. States will then have several months to work with local governments and other stakeholders and submit their recommendations and supporting documentation to EPA for area designations and boundaries by June 30, 2000. The EPA will then review and respond to the State designations including boundaries by late summer. The EPA will not make final designations prior to late December because it cannot make them until at least 4 months (120 days) after responding to the States, pursuant to a CAA requirement. Given this process, designations could not become effective prior to early 200l at the earliest, nor would conformity or other requirements. Conformity and other planning requirements would be triggered on the effective date of designations. The EPA Regional Offices should immediately begin to work with their States and Tribes on boundary recommendations to ensure that they have maximum input prior to the June 30, 2000 recommendation date and encourage States to coordinate with appropriate transportation planning agencies.

After EPA makes the final designations, it will publish them in the Federal Register and set a date on which they become effective. Historically, the effective date of a rule is usually 30 to 60 days after publication, but can be later. In the process of determining when to finalize the proposed designations and make them effective, EPA will carefully consider the time needed to prepare for any applicable requirements, as well as the status of ongoing litigation and administrative proceedings. The EPA is committed to ensuring that all State and local officials have ample time to comply with requirements that are applicable when designations become effective.

The EPA believes that the Court decision affirms the serious health risk posed by ozone. Thus, notwithstanding the schedule described above, EPA believes that it is important to issue a final action on designations to provide the public with information regarding the air quality in areas in which they live and work. In addition, areas can continue to take certain actions with respect to the 8-hour standard, such as operating monitoring sites, analyzing monitoring data, implementing public education and communications efforts regarding health impacts and potential solutions, collecting emissions inventory data, examining potential control measures such as major source Reasonably Available Control Technology and other Reasonably Available Control Measures, considering voluntary emission reduction measures and considering the integration of strategies for the attainment and maintenance of all NAAQS.

7. How should long-range transport be addressed in the boundary recommendation?

In addition to nearby areas with sources contributing to nonattainment, ozone concentrations are affected by long-range transport of ozone and its precursors (notably NOx). Thus, in certain parts of the country, such as the eastern U.S., ozone is a widespread problem. Where this is the case, the Act does not require that all contributing areas be designated nonattainment, only the nearby areas. Regional strategies, such as those employed in the Ozone Transport Region in the Northeast U.S., and in the EPA NOx SIP call, are needed to address the long-range transport component of ozone nonattainment, while the local component must be addressed through more local planning in and around the designated nonattainment area. Tribal areas may also be affected by transport.[5]

8. How should designation recommendations be handled for 8-hour ozone nonattainment areas that cover some of the same area as 1-hour ozone nonattainment areas?

In areas where the 1-hour NAAQS still applies, EPA's presumption is that the designated 8-hour nonattainment area boundary will be the C/MSA or the 1-hour nonattainment area boundary, whichever is larger.

9. What will happen if EPA does not receive a designation recommendation from a State or Tribe?

In the absence of a Governor's recommendation by June 30, 2000, EPA will determine the designation. The EPA plans to follow this guidance in designating areas. In cases where Tribes do not make their own recommendations, then EPA, upon consultation with the respective Tribe(s), will promulgate the designation it deems appropriate.

10. Must States recommend a classification for, or will EPA classify, nonattainment areas under the 8-hour ozone NAAQS?

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[5]The prohibitions and authority contained in sections 110(a)(2)(D)(i) and 126 of the Act apply to Tribes in the same manner as States.

The EPA will not classify nonattainment areas at this time; thus, States and Tribes should not submit recommendations for classifications. If EPA determines to classify areas in the future, it will provide an opportunity for State and Tribal involvement.

11. What technical information should a State consider in its designation recommendations?

To assist States and Tribes with their recommendations, the EPA is providing technical reports and maps showing locations where air quality was violating the 8-hour NAAQS based on 1997-1999 monitored data that States and Tribes may find useful in defining the boundaries of nonattainment areas. The information will be posted on EPA's web site in the immediate future.

12. What documentation should a State or Tribal government submit concerning the nonattainment area recommendations?

In addition to technical information documenting the recommendation for area boundaries noted in question number 5 above, the EPA is requesting that each State or Tribe in its submission provide certain air quality data and geographic information to support its nonattainment area recommendation. The EPA is asking for the following information:

For nonattainment areas:

a. Design value[6] for the area.
b. Period of time represented by the design value, e.g., 1997-1999.
c. Design value monitoring site location and identification number.

For attainment/unclassifiable and nonattainment areas:

d. Names of counties and tribal lands included, and
e. If partial counties or portions of tribal lands are included, the boundary definition/description as outlined below.

If the recommended nonattainment area boundary is less than a C/MSA, the State or Tribe should document its rationale for selecting the nonattainment area boundary. The documentation should address how the items in question number 5 affect the drawing of boundaries for each county or Reservation not included in the recommended nonattainment area such as population, traffic and commuting patterns, commercial development, projected growth, prevailing meteorology, nearby sources and air quality, and any other relevant or technical justification factors. In particular, where the recommended area boundary consists of parts of counties, C/MSAs, or Reservations, the State or Tribe must provide a technical analysis for its recommendation, explaining how the boundary is consistent with §107 (d)(1) of the Act.

If there is less than a full county or Reservation, the EPA is requesting a legal definition of the area, a detailed hard copy map, and, because EPA plans to map the definition, a digitized

[6]The ozone air quality design value for a site is defined as the 3-year average annual fourth-highest daily maximum 8-hour average ozone concentration.

latitude and longitude description for mapping purposes if available. Regional Offices and States should include the names of contacts from their respective offices for this information. The EPA requests that each State and Tribe submit its attainment/unclassifiable and nonattainment area designation recommendation and boundary information to EPA in both a detailed written form and in electronic form in a format consistent with how designations are identified in Part 81 of the CFR. In addition to the formal letter making the recommendation, EPA requests the States provide an electronic record in a usable file which will be merged with all other States' and Tribes' recommendations for a final complete product. An example is shown below.

Format of Recommendations for Designations

State Name
Nonattainment Areas:
    Area Name
        County or Tribal Land Names
    Area Name
        County or Tribal Land Names
Attainment/Unclassifiable Areas:
    Rest of State or County or Tribal Land Names

This is how it would appear in the Code of Federal Regulations:

81.xxx [STATE NAME].

*** * * * ***

[STATE NAME]-OZONE (8-HOUR STANDARD)

Designated Area	Designation	Classification
	Type	Type
[NAME] Area: [NAME] County..... [NAME] Area: [NAME] County..... [NAME] County..... [NAME] County..... [NAME] County..... [Name] Tribal Land [Name] County..... Rest of State..... Rest of Tribal Land.....	 Nonattainment Nonattainment Attainment/ Unclassifiable Attainment/ Unclassifiable	 LEAVE BLANK

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13. When should the recommendations be submitted?

The Governor should submit all recommendations and supporting documentation for designations for nonattainment and attainment/unclassifiable areas, boundaries, and boundary descriptions described above to the EPA Regional Office by June 30, 2000. The eligible Tribal governing body, with the assistance of the appropriate EPA Regional Office, should submit all recommendations and supporting documentation consistent with the statements in question

number 2 of this memorandum. The EPA will notify the State or Tribe no later than 120 days prior to the designation action where EPA plans to modify a recommendation.

14. Is there any special process for attainment/unclassifiable areas?

The EPA will not distinguish between attainment and unclassifiable areas. The State or Tribe should indicate if its preference is that EPA list each attainment/unclassifiable area individually (e.g., by county); otherwise, EPA will indicate that the "rest of State" or "rest of tribal land" is attainment/unclassifiable.

April 1, 2003

MEMORANDUM

SUBJECT: Designations for the Fine Particle National Ambient Air Quality Standards

FROM: Jeffrey R. Holmstead
Assistant Administrator

TO: Regional Administrators, Regions I-X

This memorandum provides guidance to State and local air pollution control agencies and Tribes on the process for designating areas for the purpose of implementing the fine particle national ambient air quality standards. The EPA plans to issue final designations on December 15, 2004. This memorandum describes the process for developing State and Tribal recommendations on designations and the time line for EPA action leading to the final designations.

The EPA promulgated the air quality standards for fine particulate matter (known as $PM_{2.5}$) on July 18, 1997 (62 Federal Register 38652). The standards were based on a number of health studies showing that increased exposure to $PM_{2.5}$ is correlated with increased mortality and a range of serious health effects, including aggravation of lung disease, asthma attacks, and heart problems. Estimates show that attainment of these standards would result in tens of thousands fewer premature deaths each year and would prevent tens of thousands of hospital admissions and millions of work absences and respiratory illnesses in children annually. The designation process for $PM_{2.5}$ that is outlined below is the next step toward developing and implementing emission control programs that will address this important public health problem.

The first step in the designation process is the submittal of State and Tribal recommendations. The EPA requests that States and Tribes provide a list of recommended designations to EPA by February 15, 2004. The EPA plans to announce its intended designations in July 2004 and will provide 120 days for States and Tribes to comment on any modifications that EPA makes to the recommended designations. We plan to publish final $PM_{2.5}$ designations for all areas on December 15, 2004. We also intend to propose and finalize its implementation rule for $PM_{2.5}$ early enough to be taken into consideration during the designation process. The EPA hopes that by following a designation schedule for $PM_{2.5}$ similar to that for the 8-hour ozone program, the States and Tribes will be able to harmonize area boundaries and future control strategies to the extent possible.

As explained in this guidance, we intend to apply a presumption that the boundaries for

urban nonattainment areas should be based on Metropolitan Area boundaries. A metropolitan area, as defined by the Office of Management and Budget, may consist of a single Metropolitan Statistical Area in some cases, and a Consolidated Metropolitan Statistical Area in other cases. These metropolitan areas provide presumptive boundaries for the geographic extent of urban areas. The presumptive use of metropolitan area boundaries to define urban nonattainment areas is based on recent evidence that violations of the $PM_{2.5}$ air quality standards generally include a significant urban-scale contribution as well as a significant larger-scale regional contribution. For rural areas that are identified as violating the $PM_{2.5}$ standards, the guidance sets forth EPA's presumption that the full county should be designated nonattainment. The approach taken in this guidance is similar to our approach to designations for the 8-hour ozone standard, and we urge States and Tribes to harmonize their ozone and $PM_{2.5}$ designation recommendations where appropriate.

Two attachments provide additional information and guidance. Attachment 1 is a time line of important dates in the fine particle NAAQS implementation process. Attachment 2 is a series of questions and answers providing more detailed guidance, including discussion of several factors to be considered in evaluating whether modifications to nonattainment area boundaries are appropriate.

This memorandum provides EPA's current views on how boundaries should be determined for designations. This guidance is not binding on States, Tribes, the public, or EPA. Issues concerning nonattainment area boundaries will be addressed in actions to designate nonattainment and attainment/unclassifiable areas under section 107 and section 301(d) of the Clean Air Act (Act). When EPA promulgates designations, that action will be final and binding on States, Tribes, the public, and EPA as a matter of law.

Staff in EPA's regional offices and the Office of Air Quality Planning and Standards are available for assistance and consultation throughout the designation process. Questions on this guidance may be directed to Tom Rosendahl at 919-541-5314 or Rich Damberg at 919-541-5592. The Regional Offices should make this guidance available to their States and Tribes and work closely with them to ensure they submit their area recommendations and supporting information by February 15, 2004.

Attachments: 2

cc: Stephen D. Page, OAQPS
Air Division Directors, Regions I-X
Margo Oge, OTAQ
Brian McLean, OAP
Elizabeth Cotsworth, ORIA

ATTACHMENT 1

TIME LINE FOR $PM_{2.5}$ NAAQS IMPLEMENTATION PROGRAM	
Date	**Item**
September 2003	EPA issues proposed $PM_{2.5}$ implementation rule
February 15, 2004	State and Tribal recommendations due for $PM_{2.5}$ designations - Recommendations can be based on 2000-2002 data
July 2004	EPA notifies States and Tribes concerning any modifications to their recommendations.
September 2004	EPA issues final $PM_{2.5}$ implementation rule
December 15, 2004	EPA issues final $PM_{2.5}$ designations.
December 2007	State implementation plans are due for $PM_{2.5}$ nonattainment areas (3 years after designation date).
December 2009-2014	Date for attaining $PM_{2.5}$ standards (5 years after designation date). - An extension of up to five years is possible with an adequate demonstration.

ATTACHMENT 2

GUIDANCE ON NONATTAINMENT AREA DESIGNATIONS FOR $PM_{2.5}$

1. What are the underlying requirements for designating areas for the $PM_{2.5}$ NAAQS?

Requirements for area designations are found in section 107 of the Clean Air Act (Act). Upon promulgation of a new or revised national ambient air quality standard (NAAQS)[1], States are required under section 107(d) of the Act to submit to EPA a recommended list of areas for designation as attainment, nonattainment, or unclassifiable. While the language of Section 107 specifically addresses States, EPA will follow the same process for Tribes to the extent practicable, pursuant to Sections 110(o) and 301(d) of the Act and the Tribal Authority Rule, or TAR.[2]

Section 107(d) specifies that nonattainment areas shall include "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." Interpretation of this requirement is a key purpose of this guidance.

Section 107 further specifies a timetable for action on designations. Under section 107(d)(1), States are to submit recommendations within one year after promulgation of a new or revised standard. Under section 107(d)(1)(B)(ii), if EPA intends to promulgate a designation that deviates from the State recommendation, it must notify the State at least 120 days before promulgating the modified designation, and EPA must provide the State the opportunity to comment on the potential modification. EPA should promulgate designations within two years

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[1] EPA promulgated the NAAQS for $PM_{2.5}$ on July 18, 1997. See 62 Federal Register 38652. The annual standard for $PM_{2.5}$ was set at a level of 15 $\mu g/m^3$, based on the 3-year average of annual arithmetic mean $PM_{2.5}$ concentrations. The 24-hour standard was set at a level of 65 $\mu g/m^3$, based on the 3-year average of the 98^{th} percentile of 24-hour $PM_{2.5}$ concentrations.

[2] The "Tribal Authority Rule," promulgated on February 12, 1998, specifies that Tribes shall be treated as States in selected cases as appropriate. See 63 FR 7254, codified at 40 Code of Federal Regulations (CFR) Part 49 (1998).

after promulgation of a new or revised standard, with a possible one year extension if EPA has insufficient information.

The Transportation Equity Act for the 21st Century (TEA-21) of 1998 amended the timetable for $PM_{2.5}$ designations, based on the recognition that the monitoring network first needed to be deployed to collect sufficient monitoring data to designate areas. Under section 6102(c)(1) of TEA-21, States are required to submit recommended area designations to EPA within 1 year after receipt of 3 years of air quality monitoring data obtained with federal reference (or equivalent) monitoring methods. Section 6102(d) requires EPA to promulgate designations within 1 year after State recommendations are due, but no later than December 31, 2005. Although the TAR provides Tribes with flexibility in meeting the schedules set forth in the Act, EPA has the obligation to designate areas consistent with the schedules in the Act. Therefore, EPA will designate Tribal areas, in consultation with the Tribes, on the same schedule as State designations. State implementation plans designed to meet the standards are then due within three years of the date of designation (e.g. December 2007) in accordance with section 172 of the Act.

2. What are the key milestones of the $PM_{2.5}$ designations process?

The milestones of the $PM_{2.5}$ designation process are listed in Attachment 1. In developing these milestones, we considered that implementation of the TEA-21 schedule for designations could be complicated by the variety of dates on which various locations first have 3 years of data available. Some sites had 3 years of data available as of July 2002, other sites did not have 3 years of data until later in 2002, and some sites will not have 3 years of data until July 2003. This approach could result in designations occurring between July 2004 and July 2005. EPA believes that a staggered designation schedule, which would yield staggered implementation plan deadlines, would hamper the regional and metropolitan area-based coordination that is needed among various governments and stakeholders. Therefore, this guidance contains single dates for State/Tribal recommendations and final designations by EPA.

EPA requests that all State and Tribal recommendations be submitted by February 15, 2004. Consistent with TEA-21 time frames, EPA plans to designate all areas by December 15, 2004. States and Tribes will be able to use the 2000-2002 data in their recommendations. Areas should be identified as “nonattainment” (violating a standard or contributing to nearby violations), or as “attainment/unclassifiable” (either meeting the standard or having insufficient data to determine air quality, and not contributing to nearby nonattainment). EPA intends to promulgate area designations in terms of these two categories. State recommendations do not apply to Indian country.

After EPA evaluates the recommendations it receives, EPA will notify States and Tribes of any modifications it intends to make to their recommendations at least 120 days before the

designations are to be finalized.[3] If a State or Tribe disagrees with any change, it may provide information to EPA to demonstrate why it believes that the proposed modification is inappropriate, and EPA will consider this information in developing the final list of area designations. In their comments, States and Tribes may take into account the 2001 to 2003 monitoring data, which EPA expects to be available before comments are due. As noted above, EPA's policy is to use the most recent three years of data available at the time of designations. EPA plans to promulgate final designations on December 15, 2004 and intends to consider the 2001 to 2003 data in making these designations.

The EPA is committed to ensuring that all stakeholders have an opportunity to participate in the designation process for the $PM_{2.5}$ NAAQS, and that State, local and Tribal officials have ample time to comply with obligations that are triggered by designations. States and Tribes are encouraged to involve their stakeholders in developing their recommendations. Regional Offices should work with States and Tribes, particularly for areas where a monitor is recording a violation of the $PM_{2.5}$ standards. If a State or Tribe does not provide any designation recommendations for specific areas, EPA will promulgate the designations it deems appropriate.

3. How are violations identified?

The first step in defining nonattainment areas is to identify monitoring sites at which air quality does not meet either the annual or 24 hour standard for $PM_{2.5}$. Appendix N to 40 CFR Part 50 specifies the procedures to be used to analyze whether air quality at any site meets the air quality standards. Procedures associated with data handling and calculations for comparing data to the $PM_{2.5}$ standards are described in more detail in the "Guideline on Data Handling Conventions for the PM NAAQS" (EPA-454/R-99-008, 1999). The EPA's designation of areas will be based on the most recent 3 consecutive calendar years of air quality data from Federal reference or equivalent method monitors. Data used must be quality-assured and meet 40 CFR part 58 requirements (e.g., for monitor siting).

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[3]EPA's legal obligation to provide 120 days notice of modifications applies only to those Tribes that have sought and received formal authority to recommend designations pursuant to the Tribal Authority Rule. However, EPA is soliciting Tribal recommendations and intends to provide 120 days notice of any modifications irrespective of whether a Tribe has this formal authority.

Many areas collect additional data on particulate matter composition using the Interagency Monitoring for Protecting Visual Environments (IMPROVE) protocol or using methods of the speciation trends network. These methods are not Federal reference methods or equivalent methods, and data collected according to these methods should not be used to determine the existence of a violation. However, as noted in 40 CFR 58 (Appendix C, section 2.9) with respect to IMPROVE protocol monitors, these methods may be used to estimate background concentrations and thus may be used to assess the geographic extent of the area contributing to a nonattainment situation.

The air quality standards for $PM_{2.5}$ specify two exceptional circumstances in which concentrations above the level of the standard are not to be interpreted as violating the standard. The first exception is that sites that monitor source-oriented hot spots in some cases should be assessed only with respect to the 24-hour standard, not the annual average standard. In 40 CFR Part 58 (Appendix D, section 2.8.1.2.3), EPA states that monitoring sites representing unique localized conditions not found elsewhere in the area should not be compared with the annual average standard. For sites that States or Tribes have designated as hot-spot sites, EPA must review whether available evidence confirms that the annual average concentrations at the site are in fact unrepresentative of conditions elsewhere in the region. If so, data from the site will not be compared against the annual standard, but it will be compared against the 24-hour standard.

The second exception arises when the option of spatial averaging is applied, which may result in a group of monitors collectively indicating attainment of the annual average standard, even though individual monitors in the group may show average concentrations which do not meet the standard. Conversely, spatial averaging could indicate nonattainment for the area even though some monitors show concentrations which meet the standard. Appendix N of 40 CFR Part 50 offers the option of applying spatial averaging in the analysis for the annual average standard. For a State or Tribe to apply spatial averaging, it must have previously designated $PM_{2.5}$ monitors for spatial averaging as an element of its $PM_{2.5}$ monitoring plan, and it must have provided a suitable opportunity for the public to comment on this intent.[4]

Monitors with data to be averaged must satisfy detailed criteria given in 40 CFR Part 58 (Appendix D, section 2.8.1.6). Sites within an identified area that meet these criteria will be addressed on a spatially averaged basis only if the State or Tribe opts to do so. For monitors that satisfy these criteria, the procedures for averaging the qualifying data are given in Appendix N to 40 CFR Part 50 and the aforementioned data handling guidance. A determination would be made as to whether the spatially averaged annual average meets or does not meet the annual average standard, irrespective of whether concentrations at any individual site meet or do not meet the annual standard.

[4] See 40 CFR Part 58.20(f) and 40 CFR Part 58.26(e) for information about public notification and public comment requirements associated with spatial averaging.

4. How should boundaries of urban nonattainment areas be determined? Are there presumptive boundaries for nonattainment areas?

As noted above, a nonattainment area must be defined not only to include the area that is violating the standard, but also to include the nearby source areas that contribute to the violation. Thus, a key factor in setting boundaries for nonattainment areas is determining the geographic extent of nearby source areas contributing to the nonattainment problem. For each monitor or group of monitors that exceed a standard, nonattainment boundaries must be set that include a sufficiently large area to include both the area judged to violate the standard and the source areas that contribute to these violations. Evaluations of source areas must account for sources of $PM_{2.5}$ precursors (such as sulfur dioxide, nitrogen oxides, ammonia, and some volatile organic compounds) as well as sources of direct $PM_{2.5}$ emissions.

EPA has examined various evidence addressing the typical geographic scale of source areas that contribute to violations of the $PM_{2.5}$ standard. This evidence indicates substantial contributions to violations of the $PM_{2.5}$ standard both from long-range transport[5] and from the collection of urban sources dispersed within metropolitan areas. To assess the metropolitan scale contribution, EPA examined the geographic distribution of total $PM_{2.5}$ concentrations in and near many metropolitan areas. EPA found an association of higher $PM_{2.5}$ concentrations with greater levels of urban activity. Comparisons of rural versus urban concentrations of the components of $PM_{2.5}$ indicate that certain components (such as carbonaceous particles and nitrates) resulting in part from urban emissions are found in significantly higher concentrations in urban areas.[6] These "urban emissions" arise from human activities, such as motor vehicle use and home heating as well as industrial activities, that occur with greater density in more populated areas.

The metropolitan area, as delineated by the Office of Management and Budget (OMB), provides a presumptive definition of the populated area associated with a core urban area.[7] Accordingly, EPA believes that the metropolitan area provides a presumptive definition of the source area that contributes to a $PM_{2.5}$ nonattainment problem. For this reason, EPA believes that the Metropolitan Area should serve as the presumptive boundary for urban $PM_{2.5}$ NAAQS nonattainment areas. This presumption reflects EPA's view that, in the absence of evidence to the contrary, violations of the $PM_{2.5}$ NAAQS in urban areas may be presumed attributable at least in part to contributions from sources distributed throughout the Metropolitan Area. This

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[5] See discussion of long-range transport of sulfate and nitrate particles in supporting materials for the Clear Skies Act at http://www.epa.gov/clearskies/.

[6] V. Rao, N. Frank, A. Rush, F. Dimmick, "Chemical Speciation of $PM_{2.5}$ in Urban and Rural Areas", in the Proceedings of the Air & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, San Francisco, November 13-15, 2002.

[7] For further information on the definitions of metropolitan areas, see: http://www.census.gov/population/www/estimates/metroarea.html.

approach parallels the presumptive metropolitan area boundaries established in the 1990 Amendments to the CAA for certain ozone nonattainment areas.

"Metropolitan areas" are defined by the Office of Management and Budget based on data collected by the U.S. Bureau of the Census. In each case, a metropolitan area includes a core urban area plus the full set of associated nearby communities. These areas in some cases include a single Metropolitan Statistical Area (MSA) that is not associated with and is typically not contiguous with any other MSA, and in other cases include multiple contiguous Primary Metropolitan Statistical Areas (PMSA) which collectively form a Consolidated Metropolitan Statistical Area. In Metropolitan Areas consisting of a single MSA, EPA presumes the entire MSA should be designated as nonattainment. In Metropolitan Areas consisting of multiple PMSA's which collectively form a Consolidated Metropolitan Statistical Area, EPA presumes the entire Consolidated Metropolitan Statistical Area should be designated nonattainment.

EPA anticipates that OMB will publish revised metropolitan area lists later in 2003. Unfortunately, this publication may not occur early enough for States and Tribes to consider the revised lists in the development of recommended designations for $PM_{2.5}$. Furthermore, EPA seeks to maximize consistency between designations for $PM_{2.5}$ and designations for the 8-hour ozone standard. The earlier timetable for ozone designations makes it even less likely that revised metropolitan area lists will be available for State and Tribal consideration in recommending ozone designations. Therefore, EPA anticipates relying on the current metropolitan area definitions, published by OMB on June 30, 1999, in establishing presumptive nonattainment area boundaries.

EPA will consider State, local, and Tribal recommendations of nonattainment area boundaries that deviate from metropolitan area boundaries based on various factors. These factors are discussed in question 5 below. Consideration of these factors may warrant a nonattainment area that has additions and/or deletions relative to OMB's defined metropolitan area.

Boundaries used for implementation of the 8-hour ozone standard may also be an important factor in determining boundaries for $PM_{2.5}$ nonattainment areas. Indeed, there are many areas that violate both the 8-hour ozone and the $PM_{2.5}$ standards, and States and Tribes may wish the nonattainment boundaries for the two pollutants to be identical in order to coordinate air quality planning, control strategy development, and the implementation of the transportation conformity program.

We recognize that, unlike ozone nonattainment problems, there are situations where nonattainment of the $PM_{2.5}$ NAAQS can arise on a very localized basis. For example, violations can be caused by the emissions from a single major source or set of sources, in some cases exacerbated by severely restricted atmospheric dispersion (such as a narrow mountain valley). In such cases, the State or Tribe should further investigate the causes of the violation and the geographic extent of the violation. The recommended boundaries of the nonattainment area should then reflect a case-specific judgment of the area sufficient to include the areas violating

the $PM_{2.5}$ NAAQS plus any additional source areas contributing to the violation. The State or Tribe will need to provide an adequate justification demonstrating that a smaller area would include the full area that is violating the standards and all nearby source areas that contribute to the violation. EPA expects there to be a limited number of situations of this type.

5. What factors will EPA consider as the basis for a State or Tribal request for an alternative urban area definition?

In some cases, a State or Tribe may find that a violation of the $PM_{2.5}$ standard is attributed to a significant metropolitan-scale component and yet believe that the Metropolitan Area does not appropriately define the area that should be designated nonattainment. EPA will consider requests for urban nonattainment area definitions that deviate from OMB's metropolitan area definitions on a case-by-case basis, considering the factors described below. These factors resemble the factors identified in previous EPA guidance on 8-hour ozone nonattainment boundaries, though EPA will make its decisions based on the distribution of sources contributing to $PM_{2.5}$ concentrations. EPA will apply these same factors in evaluating boundary modifications for both States and Tribes. $PM_{2.5}$ is a regional pollutant, and sources of $PM_{2.5}$ and its precursors are numerous and located over a broad area. For this reason, EPA believes it would be unlikely that we would designate any area as attainment that is surrounded on all sides by nonattainment areas.

EPA will consider the following factors in assessing whether to exclude portions of a metropolitan area and whether to include additional nearby areas outside the metropolitan area as part of the designated nonattainment area:

- Emissions in areas potentially included versus excluded from the nonattainment area
- Air quality in potentially included versus excluded areas
- Population density and degree of urbanization including commercial development in included versus excluded areas
- Traffic and commuting patterns
- Expected growth (including extent, pattern and rate of growth)
- Meteorology (weather/transport patterns)
- Geography/topography (mountain ranges or other air basin boundaries)
- Jurisdictional boundaries (e.g., counties, air districts, Reservations, etc.)
- Level of control of emission sources

Analyses of these factors may suggest nonattainment boundaries that are either larger or smaller than the metropolitan area. A demonstration supporting the designation of boundaries that are less than the full metropolitan area must show both that violations are not occurring in the excluded portions of the metropolitan area and that the excluded portions are not source areas that contribute to the observed violations. A State or Tribal submittal that only addresses whether violations are occurring throughout the area will not suffice as a justification for designating a nonattainment area smaller than the metropolitan area. States and Tribes are

encouraged to justify such recommendations by addressing all of the factors identified above. Recommendations to designate a nonattainment area larger than the metropolitan area should also be based on an analysis of these factors. EPA will consider these factors in evaluating State and Tribal recommendations and assessing whether any modifications are appropriate.

Air quality dispersion modeling and data interpolation techniques can be useful tools to help assess how air quality in unmonitored areas compares to air quality at monitoring sites. Accordingly, these tools can help assess the geographic area violating and/or contributing to a violation of the standards. EPA and others are undertaking various efforts to improve the reliability of these tools. In determining whether an analysis appropriately justifies modified nonattainment area boundaries, EPA will give particular consideration to the reliability of the relevant modeling or interpolation technique.

6. How should designation recommendations, including boundaries, be addressed when more than one State or Tribe might be affected?

Where more than one State or Tribe is involved in an area, close coordination is needed among the affected States and Tribes prior to the time the recommendation is made. In addition, the EPA Regional Office should coordinate where an area may be located in States or tribal lands located in two or more regions. There is a strong presumption that interstate areas making up one metropolitan area will be designated as one nonattainment area. The EPA strongly encourages States and Tribes involved in multi-jurisdictional areas to make consistent and coordinated boundary recommendations.

7. How will EPA address rural areas?

Previous questions have addressed urban areas, presumptively defined as metropolitan areas surrounding core cities, with potential boundary adjustments based on a variety of factors. This question addresses rural areas, defined here to mean counties or areas not included in or adjacent to such urban areas. An area found to violate the standard that is adjacent to a metropolitan area will generally be designated as part of that urban nonattainment area and would not be treated as rural for purposes of this guidance.

As with urban areas, the first step in determining attainment status for rural areas is to evaluate available air quality data measured by Federal reference method monitors. The second step is to assess the boundaries of the airsheds represented by the rural monitors and determine the source areas contributing to air quality at these monitors. For cases in which rural data indicate nonattainment, the nonattainment area again must be sufficient to include the full area that is violating the standards as well as any nearby source areas that are contributing to the violation.

When a rural monitor violates the standard, EPA intends to apply a presumption that the

nonattainment area shall include the full county in which the monitor is located. EPA will consider recommendations to adjust rural area nonattainment boundaries based on the same factors as it applies to urban areas, as discussed in question 5 above. Using these factors, a State or Tribe that recommends that a smaller area should be designated nonattainment should provide convincing evidence that the monitor is not representative of the full county, that the excluded portions of the county are not source areas contributing to the nonattainment, and that the excluded portions of the county are meeting the standard. Similarly, a State or Tribe may recommend that a larger area be designated nonattainment based on technical information relevant to these factors. Nevertheless, as discussed above, if nonattainment is demonstrably very localized and is attributable to localized sources, EPA intends to establish nonattainment area boundaries based on a case-specific evaluation of the nature and extent of the problem.

8. What additional documentation should a State or Tribal government submit concerning the nonattainment area recommendations?

In addition to technical information documenting the recommendation for area boundaries noted in question number 5 above, the EPA is requesting that each State or Tribe in its submission provide certain air quality data and geographic information to support its nonattainment area recommendation. The EPA is asking for the following information:

For nonattainment areas:

a. $PM_{2.5}$ design value for the area.
b. Three year period represented by the design value, e.g., 2000-2002
c. Design value monitoring site location(s) and identification number(s).

For attainment/unclassifiable AND nonattainment areas:

d. Names of counties and tribal lands included, and
e. If partial counties or portions of tribal lands are included, the boundary definition/description as outlined below.

If the recommended nonattainment area boundary is smaller than the metropolitan area definition, the State or Tribe should document its rationale for selecting the nonattainment area boundary. The documentation should address how all the factors discussed in question number 5 (such as population, traffic and commuting patterns, commercial development, projected growth, prevailing meteorology, nearby sources and air quality, and any other relevant or technical justification factors) affect the drawing of boundaries for each county or other sub-area not included in the recommended nonattainment area. In particular, where the recommended area boundary consists of parts of counties, metropolitan areas, or tribal lands, the State or Tribe must provide a technical analysis for its recommendation, explaining how the boundary is consistent with §107 (d)(1) of the Act.

If the recommendation includes any partial counties, the EPA is requesting a legal definition of the area, a detailed hard copy map, and, because EPA plans to map each area, a

digitized latitude and longitude description. The submittal should include the names of contacts for this information.

The EPA envisions making information on designation recommendations available electronically. Therefore, EPA requests that each State submit its designation recommendations, supporting documentation, and boundary information and associated maps to EPA in both a detailed written form and in electronic form.

9. How is EPA addressing Tribal concerns about the designations process?

Tribes are encouraged, but not required, to submit designation recommendations for their reservations or other areas under their jurisdiction to EPA. The TAR offers flexibility to Tribes for specific plan submittal and implementation deadlines for NAAQS-related requirements, including but not limited to such deadlines in CAA sections 110(a)(1), 172(a)(2), 182, 187, 189, and 191. However, EPA is required by the Act to promulgate area designations according to a timetable. Therefore, if a Tribe wishes to participate in the designation process they must submit a recommendation in time for EPA to consider that recommendation when making a designation. In cases where Tribes do not make a recommendation, the EPA, upon consultation with the respective Tribe(s), will promulgate the designation it deems appropriate.

EPA has discussed designation issues with many Tribal representatives and we recognize that there are several issues of particular concern to Tribes. Some Tribes have expressed concern that where a violation is monitored in a metropolitan area that includes tribal lands, the tribal lands presumptively should not be part of the urban nonattainment area, because the tribal lands often are not politically and economically integrated with the urban area. EPA will address this concern on a case-by-case basis. Upon request, EPA will help any Tribe obtain relevant information addressing the factors described under question 5 above. As with State lands, EPA will use this information to help judge whether the tribal lands are meeting the air quality standards and whether the tribal lands are a source area contributing to nonattainment in the metropolitan area. EPA will designate the tribal lands based on this information.

Some Tribes have expressed concern about the use of monitors located on State lands to establish designations for tribal lands. Given EPA's obligation to promulgate designations for all locations, EPA by necessity must judge the air quality of unmonitored locations on the basis of monitoring data from other locations. Where a monitor indicates a violation of an air quality standard, EPA will designate a nonattainment area that includes unmonitored areas either that EPA judges also to be violating the standard or that EPA judges to be a nearby source area contributing to the nonattainment. Some Tribes have also raised concerns with the designation process that they may not have the resources to do the detailed analysis necessary to prepare their recommendations. EPA offers to work with Tribes on their recommendations upon request.

Northwest Indiana Truck Stop Electrification Project

IDEM is working in conjunction with the Northwest Indiana Community-Based Diesel Workgroup and U.S. EPA to launch a demonstration project to reduce long-term idling of heavy-duty diesel vehicles at idling hot-spots such as truck stops/travel centers in Northwest Indiana. IDEM received a grant from U.S. EPA for partial funding of this $500,000 project. Other funding contributors include NiSource Energy Company, Indiana Department of Commerce, IDEM, and U.S. DOT via the Congestion Mitigation Air Quality funding program.

General Project Scope

The installation and use of Advanced Truck Stop Electrification (ATSE) at the Pilot Oil Travel Center located at the I80/94 and Burr Street interchange in Gary, Indiana. The ATSE design was selected because it can be implemented and used by trucking fleets without modifying the truck. The ability of having trucks use the ATSE technology immediately offers a significant advantage over traditional shore-power TSE. The IdleAire ATSE technology delivers heating, cooling, cable television, internet access, and auxiliary power outlets to the parked vehicle.

The goals of this project are to:

- Reduce NOx, HC, CO, PM, CO2 and air toxic emissions from idling heavy-duty diesel vehicles (HDDV) (tractor trailers).
- Conserve diesel fuel by reducing idling hours.
- Reduce oil consumption and/or waste from idling HDDV engines.
- Reduce HDDV maintenance costs.
- Reduce the noise levels from idling HDDV engines.
- Improve the quality of life for residents of Gary, Indiana that reside in close proximity to the site.
- Assess the benefits of the project for marketing similar anti-idling strategies in the future.

PROJECT APPROACH/SCOPE OF WORK

1. Site selection

   Based on the number and proximity of residents potentially affected by long-term HDDV idling, and the level of cooperation established with the operator, the Pilot Oil Travel Center located at the I-80/94 and Burr Street interchange in Gary, Indiana is the selected site for the project.

2. Procurement and Installation

   IDEM will work in close coordination with the Northwest Indiana Diesel Workgroup to procure the services of a reputable vendor capable of managing the installation and operations process.

   Note: IdleAire Corporation, Inc. is the only known vendor capable of providing the equipment and services necessary for the completion of this project.

3. Project Implementation and Monitoring

   IDEM will assess emission reductions and fuel savings associated with reduced idling times of trucks using the ATSE technology. IDEM will use EPA data on baseline idling emissions and fuel consumption to determine actual emission and fuel use reductions.

   IdleAire will provide data on the amount of time the trucks used the ATSE technology and the amount of energy (i.e., kW use) consumed through the use of their technology. As per IdleAire's business plan, IdleAire will provide on-site assistance for the use, safety, and maintenance of the technology.

   Pilot Oil will provide information, prior to the installation of the ATSE technology, on the number of trucks using their facility (prior 3 months), the percentage of trucks idling for long-duration periods (prior 3 months), the average number of hours spent idling (survey and field observations), and driver surveys on reaction to the ATSE technology.

4. Duration of Project

   Construction is expected to commence by early October 2003, and is expected to be complete by January 2004.

Operational Cost Summary for IdleAire Technology

Traditional Idling Vehicle

Average Length of Time a Vehicle Idles at a Travel Center:	8.5 Hours
Average Amount of Fuel Burned While Idling at Travel Center:	8.5 Gallons
Average Cost for Fuel While Idling at Travel Center:	$12.75

IdleAire Technology

Average Length of Time a Vehicle Idles at a Travel Center:	9 Hours
Average Amount of Fuel Burned While Idling at Travel Center:	0 Gallons
Average Cost for Fuel While Idling at Travel Center:	$0.00
Average Fee for Use of IdleAire Technology:	$11.00

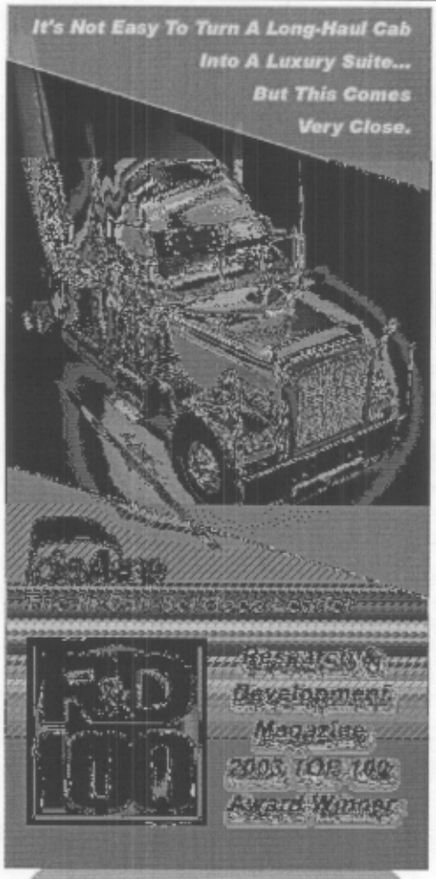
Who Pays the User Fee?

Most commonly it is the trucking company, as the use of IdleAire technology costs less than the use of fuel for idling and results in less wear on engines.

IdleAire Technologies Corporation

The In-Cab Services Leader

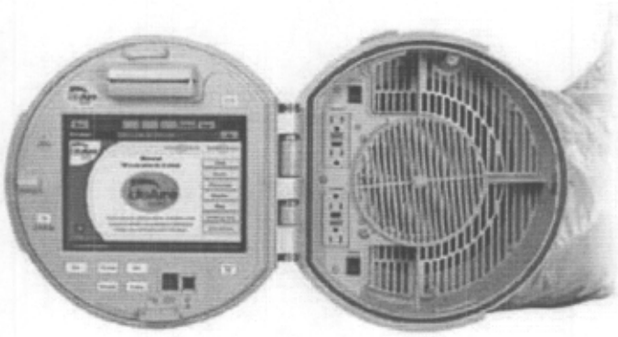
:: About IdleAire | :: Technology | :: Services | :: The Industry | :: Newsroom | ::



IdleAire National Alert

IdleAire...A Practical Alternative to Diesel Idling

IdleAire Technologies Corporation provides a quiet, clean, cost-effective alternative to the extended idling of diesel trucks wherever they congregate.



The IdleAire Service Module -- Mouseover for details

The trucking industry is an indispensable part of the North American economy...and it's growing.

In the U.S. alone, trucks transport 87.5% of all goods; 1.3 million of those trucks are "long haul" trucks with sleeper cabs and are powered by diesel engines.

These drivers and their rigs congregate at terminals waiting to load or unload, or at travel centers for the 8 hours rest required after a maximum of 10 hours on the road. During that time, they live in their cabs because motels are too expensive and their trucks and loads too valuable to be left unattended.

In each instance, they idle their engines to heat and cool their cabs, and to enjoy appliances they may have to make life more comfortable without draining the vehicle's batteries.

This extended idling consumes fuel, creates air and noise pollution, shortens engine life and vibrates the cab of the truck--unpleasant impacts on the driver, the truck owner, the travel center or terminal, neighborhoods ... and the nation's energy independence.

June 11,
IdleAire,
America
Pact

ful

IdleAire
convenie
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Current IdleAire Site Deployment
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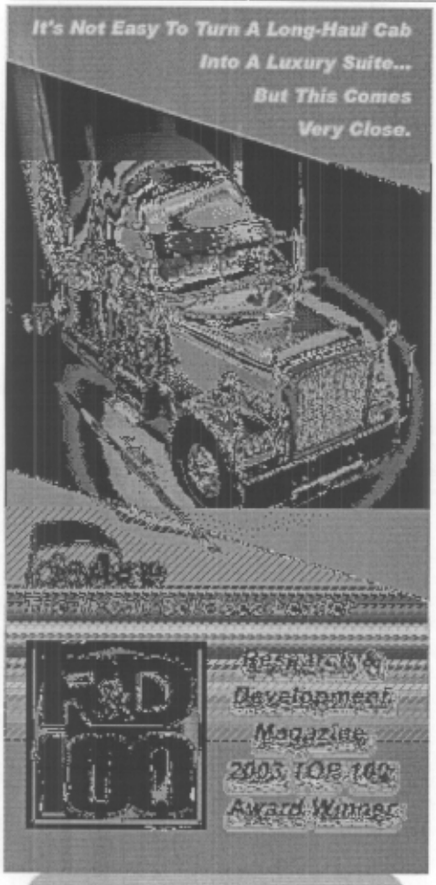
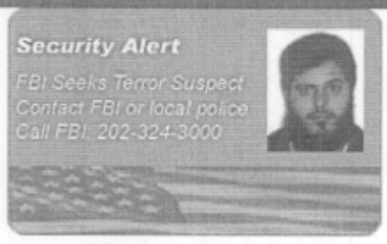
110 VAC

Singer/songwriter GM Paterson -- Official IdleAire driver spokesman. You'll see a lot more of GM soon. To view GM's Web site, click here!





IdleAire National Alert

Environmental / Health Implications

The pollution from the extended idling of diesel trucks in the U.S. is nothing short of startling.

While extended idling has received little research attention, Clean Air Technologies International in New York did a landmark study in 2001. Data from that study has allowed us to make the following estimate about truck pollution:

A single, standard heavy-duty diesel truck with a 425 horsepower, operated the standard 306 days a year, idling during legally required rest breaks and stopping for other reasons for 30 minutes per day produces 55,833 lbs. of emissions annually-solely from idling. These emissions include: 54,240 lbs. of carbon dioxide, 1,047 lbs. of nitrogen oxides, 396 lbs. of carbon monoxide 110 lbs. of volatile organic compounds and 40 lbs. of particulate matter.

Multiplied by just the 1.3 million long-haul trucks with sleeper cabs on the road and that's 36.2 million tons of emissions every year - solely from unnecessary idling.

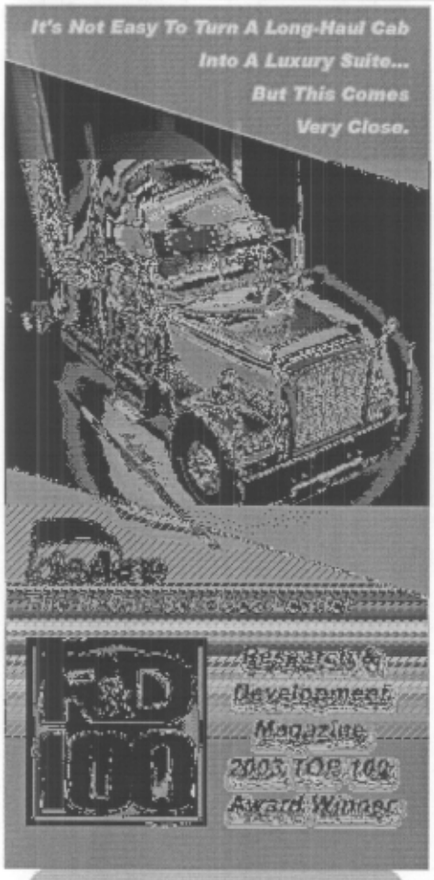
From another perspective, a typical 100-space travel center with the average 66% occupancy introduces 6,271 tons of emissions into the surrounding community each year.

Pursuing that same perspective, the 272,000 parking spaces available at commercial travel centers alone introduce nearly 12 million tons of pollution into their respective communities - solely from idling.

Click here for more information about the energy implications of diesel idling.
Click here for more information about the health implications of diesel idling.

IdleAire Technologies Corporation

The In-Cab Services Leader



IdleAire National Alert

Installation & Operation

To use the device, a driver pulls into a parking space adjacent to an IdleAire unit and switches off the engine. The driver first installs a window adapter purchased and carried in the truck. Outside, the driver then inserts the round IdleAire service delivery console into the window (or into a universal access port built into the truck) and locks the unit in place.

Back in the cab, the driver opens the console and swipes a fleet card, credit card or an IdleAire charge or debit card through the console's integral card reader. The IdleAire financial network verifies the payment and activates the unit. Using the touch screen, the driver sets the thermostat for temperature and fan speed, plugs in a television and/or phone and selects other desired state-of-the-art services.

Upon leaving, the driver "signs off" and closes the unit, then unlocks and removes the console, removes the adapter and drives away.

IdleAire monitors the use of each parking space from a centrally-located network operations center (NOC).

Park at an IdleAire space and turn off your vehicle.

Install the reusable plastic adapter that custom fits your truck window to the IdleAire service module.

Simply insert the module into the plastic window adapter. Turn the handle to engage the system and activate security.

Open the service module from inside the cab of your truck and start the check-in process.

Slide your IdleAire Member card and choose payment method. We accept fleet cards, Visa, MasterCard, and IdleAire prepaid value cards. Verify your personal information.

From the main menu you can access the thermostat, transfer funds to IdleAire Member cards or activate the high speed Internet.

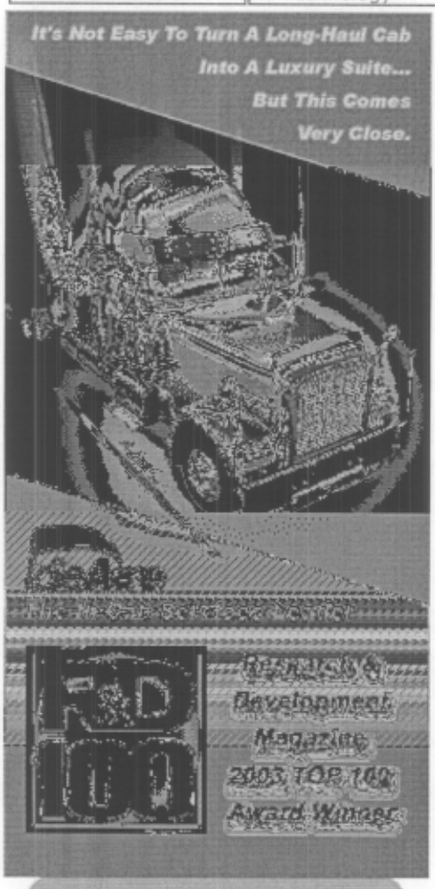
Touch the thermostat button, use the on-screen buttons to adjust the temperature of the air flow. You can also

adjust the fan speed from this screen.

Plug a USB keyboard into the service module and use the touch screen display to surf the Internet.

Rest in the comfort of an idle free environment, enjoying free cable/satellite television and local telephone access.

Return to IdleAire technology overview



IdleAire National Alert

Control & Monitoring

Custom software at the Company's network operations center monitors the entire system at every parking space, reporting how well each unit is functioning and whether a specific parking space is being used. Current monitoring gathers the following information:

- Ambient air temperature
- Output air temperature
- Return air temperature
- Fan output
- Coolant (Freon R-22) pressure and temperature
- Supply voltage
- Driver ID
- Odometer reading
- Credit status

This data is transmitted from individual units to the NOC.

The system also tracks the payment status of each transaction. Drivers pay for the service with a credit card, fleet card or an IdleAire pre-paid card. Drivers can purchase the pre-paid card at participating travel plazas.

The NOC can interact with the driver via a 10.4" LCD color display screen that is integral to every service delivery module. The LCD display is used to inform the driver of unit status, billing and account information, and to aid in customer support and for other messages. The driver also uses the screen and integral computer to respond to messages, and to enter credit card or other billing information, and to browse the World Wide Web.

Return to IdleAire technology overview

INDIANA OZONE 8-HOUR, 1995-2002

Fort Wayne Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Allen County

Last update:October 24, 2002

Leo HS

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.104		0.099		0.098		**0.098**		0.097		12
1996	0.091		0.089		0.089		**0.087**		0.082		4
1997	0.089	7/12	0.087	5/24	0.087	6/24	**0.086**	6/29	0.085	7/13	5
1998	0.096	5/15	0.092	9/13	0.091	7/13	**0.089**	5/19	0.089	9/12	8
1999	0.094	9/3	0.093	6/23	0.091	7/16	**0.091**	9/4	0.090	6/10	12
2000	0.098	6/9	0.096	6/1	0.091	6/8	**0.091**	7/27	0.080	7/26	4
2001	0.093	6/28	0.089	7/20	0.083	6/13	**0.082**	7/16	0.080	6/19	2
2002	0.096	8/1	0.094	7/14	0.094	7/15	**0.093**	6/23	0.091	8/10	13
(95-97 ave)							**0.090**				
(96-98 ave)							**0.087**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.090**				
(99-01 ave)							**0.088**				
(00-02 avg)							**0.088**				

Fort Wayne

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.10		0.10		0.092		**0.090**		0.09		5
1996	0.098		0.097		0.095		**0.095**		0.094		10
1997	0.09	5/24	0.089	7/12	0.088	7/13	**0.087**	6/24	0.087	8/1	7
1998	0.094	5/15	0.091	9/13	0.09	9/12	**0.089**	7/13	0.085	5/14	5
1999	0.094	9/3	0.088	6/22	0.088	6/23	**0.088**	9/2	0.087	6/10	11
2000	0.088	6/9	0.083	6/1	0.082	7/27	**0.081**	6/8	0.072	7/26	1
2001	0.079	6/28	0.079	7/20	0.076	6/19	**0.074**	7/16	0.071	6/14	0
2002	0.100	8/1	0.098	9/9	0.097	7/14	**0.097**	8/10	0.096	7/15	15
(95-97 ave)							**0.090**				
(96-98 ave)							**0.090**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.086**				
(99-01 ave)							**0.081**				
(00-02 ave)							**0.084**				

Fort Wayne Metropolitan Area
EIGHT HOUR OZONE AVERAGES (PPM)

Huntington County

Roanoke

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2000	0.093	6/9	0.091	6/1	0.087	6/8	**0.087**	7/27	0.079	7/26	4
2001	0.085	6/19	0.083	6/18	0.082	6/14	**0.082**	6/28	0.080	6/13	1
2002	0.090	7/14	0.090	8/1	0.090	8/10	**0.089**	6/22	0.089	7/15	10
(98-00 ave)							**0.087**				
(99-01 ave)*							**0.084**				
(00-02 ave)							**0.086**				

Average of 00 and 01 only

Louisville, KY Metropolitan Area
EIGHT HOUR OZONE AVERAGES (PPM)

Clark County

Charlestown

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.114		0.111		0.108		**0.098**		0.092		18
1996	0.094		0.090		0.083		**0.081**		0.080		2
1997	0.111	7/17	0.101	7/12	0.097	6/24	**0.097**	7/18	0.091	8/1	10
1998	0.132	9/13	0.112	9/12	0.109	9/5	**0.104**	5/19	0.103	5/29	22
1999	0.096	6/22	0.091	6/10	0.089	6/11	**0.089**	7/30	0.088	8/23	11
2000	0.088	6/9	0.088	8/17	0.087	6/1	**0.085**	7/2	0.084	7/27	4
2001	0.096	5/5	0.088	7/16	0.087	6/19	**0.086**	6/13	0.084	6/12	4
2002	0.103	7/8	0.101	8/1	0.101	8/10	**0.100**	9/7	0.095	7/16	17
(95-97 ave)							**0.092**				
(96-98 ave)							**0.094**				
(97-99 ave)							**0.096**				
(98-00 ave)							**0.092**				
(99-01 ave)							**0.086**				
(00-02 ave)							**0.090**				

Louisville, KY Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Floyd County

New Albany

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.10		0.096		0.096		**0.094**		0.094		14
1996	0.113		0.107		0.093		**0.091**		0.089		16
1997	0.109	7/17	0.107	6/28	0.089	6/23	**0.084**	7/13	0.083	7/18	3
1998	0.119	9/13	0.115	5/14	0.101	5/19	**0.100**	8/22	0.100	9/12	14
1999	0.109	6/22	0.099	6/21	0.094	6/10	**0.094**	7/30	0.094	8/17	10
2000	0.08	7/27	0.080	8/17	0.077	7/8	**0.077**	8/14	0.076	8/15	0
2001	0.084	8/1	0.080	6/18	0.077	8/7	**0.076**	8/2	0.074	6/19	0
2002	0.112	9/8	0.101	7/8	0.099	9/6	**0.097**	8/10	0.095	8/3	13
(95-97 ave)							**0.089**				
(96-98 ave)							**0.091**				
(97-99 ave)							**0.092**				
(98-00 ave)							**0.090**				
(99-01 avg)							**0.082**				
(00-02 ave)							**0.083**				

Indianapolis Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Marion County

Mann Rd.

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.096		0.093		0.092		**0.087**		0.086		7
1996	0.099		0.098		0.097		**0.093**		0.089		5
1997	0.089	6/28	0.086	5/24	0.085	9/16	**0.084**	7/12	0.083	8/1	3
1998	0.096	5/19	0.094	9/14	0.093	5/14	**0.092**	9/12	0.091	9/13	9
1999	0.094	5/29	0.093	6/21	0.093	9/4	**0.090**	9/2	0.088	6/10	9
2000	0.089	6/9	0.086	6/1	0.082	6/8	**0.082**	7/27	0.082	9/19	2
2001	0.080	6/13	0.080	6/19	0.080	8/6	**0.078**	5/6	0.077	9/6	0
2002	0.103	6/21	0.101	6/22	0.099	7/15	**0.094**	8/10	0.090	7/7	12
(95-97 ave)							**0.088**				
(96-98 ave)							**0.089**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.088**				
(99-01 ave)							**0.083**				
(00-02 ave)							**0.084**				

Harding St.

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.104		0.099		0.095		**0.091**		0.091		
1996	0.105		0.099		0.098		**0.097**		0.089		7
1997	0.093	6/28	0.093	7/20	0.087	9/16	**0.085**	5/24	0.085	7/17	6
1998	0.092	9/12	0.089	9/5	0.088	5/15	**0.087**	9/13	0.086	7/13	7
1999	0.099	5/29	0.096	6/22	0.095	6/21	**0.094**	6/10	0.093	9/4	7
2000	0.088	6/9	0.086	7/27	0.085	6/1	**0.079**	6/8	0.068	9/19	3
2001	0.088	6/13	0.087	5/6	0.085	6/19	**0.081**	8/6	0.079	7/31	3
2002	0.118	6/21	0.111	6/22	0.100	7/15	**0.099**	8/10	0.095	8/3	12
(95-97 ave)							**0.091**				
(96-98 ave)							**0.089**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.086**				
(99-01 ave)							**0.084**				
(00-02 ave)							**0.086**				

Indianapolis Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Fort Benjamin Harrison

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.106		0.101		0.10		**0.095**		0.094		15
1996	0.123		0.101		0.10		**0.096**		0.095		10
1997	0.105	7/12	0.095	8/1	0.092	7/25	**0.090**	7/17	0.088	5/24	8
1998	0.102	9/13	0.097	9/12	0.096	5/14	**0.095**	5/15	0.093	8/22	14
1999	0.101	5/29	0.101	9/1	0.096	6/10	**0.096**	6/22	0.094	9/4	11
2000	0.091	6/9	0.089	6/1	0.083	7/27	**0.081**	6/8	0.073	9/19	2
2001	0.098	7/31	0.091	6/13	0.089	8/8	**0.087**	6/19	0.087	8/1	6
2002	0.112	6/21	0.105	6/22	0.104	7/15	**0.100**	8/10	0.099	7/16	11
(95-97 ave)							**0.093**				
(96-98 ave)							**0.093**				
(97-99 ave)							**0.093**				
(98-00 ave)							**0.090**				
(99-01 ave)							**0.088**				
(00-02 ave)							**0.089**				

Naval Air Warfare Center

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.104		0.097		0.094		**0.091**		0.091		12
1996	0.125		0.10		0.094		**0.090**		0.089		6
1997	0.094	7/12	0.089	8/1	0.088	7/17	**0.086**	8/3	0.085	7/25	5
1998	0.095	5/14	0.094	5/15	0.093	9/12	**0.093**	9/13	0.092	5/19	8
1999	0.099	5/29	0.098	6/10	0.096	6/22	**0.096**	9/1	0.092	6/21	8
2000	0.092	6/9	0.091	6/1	0.083	7/27	**0.082**	6/8	0.076	8/30	2
2001	0.094	7/31	0.085	5/6	0.083	6/13	**0.081**	8/7	0.079	8/6	2
2002	0.131	6/21	0.111	7/15	0.107	7/16	**0.106**	6/22	0.100	8/10	16
(95-97 ave)							**0.089**				
(96-98 ave)							**0.089**				
(97-99 ave)							**0.091**				
(98-00 ave)							**0.090**				
(99-01 ave)							**0.086**				
(00-02 ave)							**0.089**				

Indianapolis Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Hendricks County

Avon

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2000	0.095	6/9	0.094	6/1	0.088	7/27	**0.087**	6/8	0.084	9/19	4
2001	0.089	8/6	0.088	6/13	0.085	6/19	**0.083**	5/6	0.080	5/3	3
2002	0.114	6/22	0.102	6/21	0.097	8/10	**0.095**	7/15	0.092	6/23	9
(98-00 ave)							**0.087**				
(99-01 ave)*							**0.085**				
(00-02 ave)							**0.088**				

*Average of 00 and 01 only

Boone County

Whitestown

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2000	0.092	6/9	0.091	6/1	0.082	7/27	**0.082**	6/8	0.081	9/19	2
2001	0.096	6/13	0.090	6/19	0.085	5/6	**0.084**	6/28	0.082	6/27	3
2002	0.115	6/22	0.115	6/23	0.104	6/21	**0.099**	7/15	0.097	8/10	13
(98-00 ave)							**0.082**				
(99-01 ave)*							**0.083**				
(00-02 ave)							**0.088**				

*Average of 00 and 01 only

Shelby County

Fairland

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2000	0.097	6/9	0.092	6/8	0.089	6/1	**0.087**	7/27	0.080	9/19	4
2001	0.098	8/7	0.095	6/13	0.095	6/18	**0.093**	6/19	0.088	5/6	6
2002	0.116	7/15	0.104	7/16	0.103	6/21	**0.099**	6/22	0.099	9/10	14
(98-00 ave)							**0.087**				
(99-01 ave)*							**0.090**				
(00-02 ave)							**0.093**				

*Average of 00 and 01 only

Indianapolis Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Johnson County

Trafalgar

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1997	0.095	6/28	0.086	9/16	0.084	7/18	**0.084**	8/1	0.083	5/24	2
1998	0.093	5/19	0.093	9/12	0.091	8/22	**0.090**	8/21	0.089	9/13	12
1999	0.099	5/29	0.097	6/10	0.096	6/21	**0.095**	6/22	0.092	9/4	10
2000	0.091	6/8	0.091	6/9	0.085	6/1	**0.084**	7/27	0.082	9/19	3
2001	0.086	6/19	0.085	6/13	0.082	5/4	**0.082**	5/6	0.081	5/5	2
2002	0.111	7/15	0.100	8/10	0.098	6/22	**0.096**	7/16	0.094	9/7	12
(95-97 ave)							**0.084**				
(96-98 ave)							**0.087**				
(97-99 ave)							**0.089**				
(98-00 ave)							**0.089**				
(99-01 ave)							**0.087**				
(00-02 ave)							**0.087**				

Morgan County

Monrovia

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1997	0.091	6/28	0.089	5/24	0.088	6/24	**0.088**	7/17	0.086	7/12	7
1998	0.097	5/19	0.093	9/12	0.092	9/13	**0.090**	8/22	0.088	9/5	10
1999	0.097	5/29	0.097	9/2	0.097	9/4	**0.093**	5/11	0.091	9/1	11
2000	0.093	6/1	0.093	6/9	0.090	7/27	**0.088**	6/8	0.086	9/19	5
2001	0.089	8/6	0.088	6/19	0.084	6/13	**0.082**	5/3	0.081	5/4	2
2002	0.101	6/21	0.101	6/22	0.096	7/15	**0.093**	7/7	0.093	8/10	12
(95-97 ave)							**0.088**				
(96-98 ave)							**0.089**				
(97-99 ave)							**0.090**				
(98-00 ave)							**0.090**				
(99-01 ave)							**0.087**				
(00-02 ave)							**0.087**				

Indianapolis Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Hamilton County

Noblesville Jr. HS

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.111		0.098		0.098		**0.095**		0.095		13
1996	0.111		0.103		0.103		**0.102**		0.10		10
1997	0.122	7/12	0.099	7/13	0.097	7/25	**0.095**	8/1	0.093	6/24	8
1998	0.112	9/13	0.102	7/13	0.102	9/12	**0.100**	5/15	0.10	9/5	16
1999	0.103	5/29	0.101	6/10	0.099	9/1	**0.096**	9/4	0.095	6/22	18
2000	0.10	6/9	0.099	6/1	0.09	6/8	**0.090**	7/27	0.079	9/19	4
2001	0.103	6/13	0.096	8/1	0.089	8/6	**0.088**	6/19	0.083	6/18	4
2002	0.108	6/21	0.107	6/22	0.104	9/7	**0.101**	8/10	0.099	6/20	17
(95-97 ave)							**0.097**				
(96-98 ave)							**0.099**				
(97-99 ave)							**0.097**				
(98-00 ave)							**0.095**				
(99-01 ave)							**0.091**				
(00-02 ave)							**0.093**				

Hancock County

Fortville

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.105		0.103		0.10		**0.097**		0.089		8
1996	0.11		0.101		0.10		**0.100**		0.096		10
1997	0.101	7/12	0.099	8/1	0.091	7/13	**0.088**	7/17	0.088	7/18	7
1998	0.108	9/13	0.104	9/12	0.095	8/22	**0.094**	5/29	0.093	9/14	13
1999	0.099	5/29	0.098	6/10	0.096	6/22	**0.094**	9/4	0.092	9/1	15
2000	0.098	6/9	0.097	6/1	0.087	7/27	**0.086**	6/8	0.081	9/19	4
2001	0.102	6/13	0.102	8/8	0.091	6/19	**0.089**	7/31	0.087	8/6	8
2002	0.107	8/10	0.106	6/21	0.101	6/22	**0.101**	7/15	0.097	6/24	18
(95-97 ave)							**0.095**				
(96-98 ave)							**0.094**				
(97-99 ave)							**0.092**				
(98-00 ave)							**0.091**				
(99-01 ave)							**0.089**				
(00-02 ave)							**0.092**				

Indianapolis Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Madison County

East Elementary

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.101		0.100		0.095		**0.091**		0.085		10
1996	0.113		0.101		0.101		**0.098**		0.097		14
1997	0.097	8/1	0.086	7/12	0.085	7/13	**0.082**	5/24	0.08	7/17	3
1998	0.108	9/13	0.107	9/12	0.098	5/29	**0.097**	5/15	0.097	8/22	13
1999	0.099	6/10	0.099	6/22	0.098	5/29	**0.093**	9/4	0.092	6/21	15
2000	0.091	6/1	0.082	7/27	0.081	4/30	**0.080**	6/9	0.075	5/31	1
2001	0.102	8/8	0.093	6/13	0.093	6/19	**0.090**	6/18	0.082	6/11	4
2002	0.109	6/21	0.106	7/8	0.104	6/22	**0.104**	7/15	0.101	7/16	16
(95-97 ave)							**0.090**				
(96-98 ave)							**0.092**				
(97-99 ave)							**0.090**				
(98-00 ave)							**0.090**				
(99-01 ave)							**0.087**				
(00-02 ave)							**0.091**				

Delaware County

Albany

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2001	0.095	6/19	0.089	6/13	0.085	6/11	**0.084**	5/3	0.084	5/6	3
2002	0.098	6/22	0.098	7/16	0.097	6/23	**0.095**	6/21	0.095	8/10	12
(99-01 ave)*							**0.084**				
(00-02 ave)							**0.089**				

* Site started 01/04/01

Northwest Indiana Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Lake County

Gary IITRI

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.106		0.105		0.095		**0.095**		0.094		9
1996	0.103		0.102		0.096		**0.095**		0.093		8
1997	0.10	7/26	0.099	6/29	0.098	8/2	**0.092**	6/28	0.091	7/1	7
1998	0.089	5/19	0.085	9/6	0.084	9/12	**0.084**	9/19	0.080	5/27	2
1999	0.102	9/5	0.099	9/3	0.098	9/4	**0.094**	9/2	0.087	7/24	5
2000	0.091	8/15	0.082	6/8	0.082	6/9	**0.075**	6/1	0.068	8/30	1
2001	0.094	6/28	0.087	7/9	0.085	8/5	**0.083**	8/7	0.082	6/13	3
2002	0.111	6/24	0.099	6/23	0.094	6/22	**0.092**	6/21	0.091	7/7	8
(95-97 ave)							**0.094**				
(96-98 ave)							**0.090**				
(97-99 ave)							**0.090**				
(98-00 ave)							**0.084**				
(99-01 ave)							**0.084**				
(00-02 ave)							**0.083**				

Lake County

Hammond

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.129		0.114		0.111		**0.100**		0.096		13
1996	0.109		0.097		0.095		**0.094**		0.093		10
1997	0.097	7/12	0.095	6/28	0.095	6/29	**0.094**	7/17	0.094	8/1	9
1998	0.101	9/6	0.089	9/12	0.088	7/13	**0.085**	9/13	0.085	9/19	5
1999	0.100	9/3	0.100	9/5	0.096	9/4	**0.095**	9/2	0.089	5/30	8
2000	0.089	6/8	0.089	6/9	0.088	9/1	**0.086**	6/1	0.082	8/15	4
2001	0.097	6/13	0.094	6/28	0.091	6/26	**0.090**	6/30	0.089	6/29	8
2002	0.104	6/22	0.103	6/24	0.101	6/9	**0.101**	6/23	0.100	9/8	18
(95-97 ave)							**0.096**				
(96-98 ave)							**0.091**				
(97-99 ave)							**0.091**				
(98-00 ave)							**0.088**				
(99-01 ave)							**0.090**				
(00-02 ave)							**0.092**				

Northwest Indiana Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Lowell

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1998	0.106	6/23	0.089	5/14	0.088	9/13	**0.087**	9/11	0.087	9/12	6
1999	0.093	9/2	0.093	9/5	0.092	6/21	**0.090**	9/3	0.087	5/29	10
2000	0.090	6/9	0.087	6/8	0.081	6/1	**0.075**	7/13	0.074	7/6	2
2001	0.084	7/9	0.083	6/13	0.081	6/28	**0.077**	6/26	0.077	6/30	0
2002	0.091	6/22	0.09	6/23	0.088	7/14	**0.086**	8/10	0.085	6/21	7
(96-98 ave)							**0.087**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.084**				
(99-01 ave)							**0.080**				
(00-02 ave)							**0.079**				

Porter County

Ogden Dunes

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.109		0.108		0.107		**0.104**		0.098		18
1996	0.121		0.110		0.105		**0.096**		0.096		7
1997	0.100	7/26	0.099	8/2	0.094	6/29	**0.091**	6/28	0.090	6/13	10
1998	0.112	6/27	0.097	5/19	0.09	7/13	**0.087**	6/23	0.087	9/12	7
1999	0.105	7/24	0.104	9/5	0.102	9/3	**0.101**	9/4	0.099	9/2	9
2000	0.101	8/15	0.088	9/1	0.085	6/8	**0.085**	6/9	0.077	6/1	4
2001	0.095	6/28	0.093	6/26	0.085	7/9	**0.085**	8/7	0.083	6/13	4
2002	0.119	6/24	0.105	6/23	0.101	6/21	**0.101**	6/22	0.098	9/8	12
(95-97 ave)							**0.097**				
(96-98 ave)							**0.091**				
(97-99 ave)							**0.093**				
(98-00 ave)							**0.091**				
(99-01 ave)							**0.090**				
(00-02 ave)							**0.090**				

Northwest Indiana Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Dunes National Lake Shore

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1998	0.105	6/27	0.102	5/19	0.092	9/12	**0.090**	5/15	0.090	5/27	5
1999	0.105	9/3	0.104	7/24	0.103	9/5	**0.102**	9/2	0.101	9/4	11
2000	0.099	8/15	0.084	9/1	0.078	6/8	**0.073**	8/31	0.071	7/13	1
2001	0.093	6/28	0.090	6/26	0.084	7/9	**0.082**	6/13	0.081	6/29	2
2002	0.113	6/24	0.104	6/21	0.098	6/23	**0.097**	6/22	0.091	6/9	11
(96-98 ave)							**0.090**				
(97-99 ave)							**0.096**				
(98-00 ave)							**0.088**				
(99-01 ave)							**0.085**				
(00-02 ave)							**0.084**				

Valparaiso

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1998	0.098	5/19	0.089	9/12	0.088	5/15	**0.085**	9/6	0.085	9/13	6
1999	0.097	9/2	0.097	9/5	0.094	7/24	**0.091**	5/29	0.091	6/11	11
2000	0.092	6/8	0.092	6/9	0.091	8/15	**0.082**	6/1	0.076	8/30	3
2001	0.079	7/15	0.078	6/13	0.078	7/16	**0.077**	6/29	0.077	6/30	0
2002	0.110	6/24	0.105	7/15	0.101	9/8	**0.100**	6/21	0.099	7/14	17
(96-98 ave)							**0.085**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.086**				
(99-01 ave)							**0.083**				
(00-02 ave)							**0.086**				

Northwest Indiana Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

LaPorte County

Michigan City

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.131		0.120		0.118		**0.115**		0.109		20
1996	0.118		0.109		0.106		**0.102**		0.095		10
1997	0.112	6/29	0.107	7/26	0.098	8/3	**0.096**	7/17	0.093	6/28	9
1998	0.109	6/27	0.096	5/19	0.095	5/15	**0.093**	7/14	0.092	9/6	12
1999	0.108	7/24	0.096	9/3	0.088	9/5	**0.088**	5/30	0.086	9/2	6
2000	0.103	8/15	0.090	6/8	0.089	6/9	**0.080**	9/1	0.076	6/1	3
2001	0.098	8/7	0.092	6/26	0.090	6/28	**0.090**	6/29	0.089	8/8	8
2002	0.116	6/24	0.113	6/23	0.107	6/21	**0.107**	7/3	0.106	6/22	15
(95-97 ave)							**0.104**				
(96-98 ave)							**0.097**				
(97-99 ave)							**0.092**				
(98-00 ave)							**0.087**				
(99-01 ave)							**0.086**				
(00-02 ave)							**0.092**				

LaPorte

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1997	0.136	7/26	0.105	7/1	0.097	7/17	**0.095**	6/29	0.088	6/28	8
1998	0.096	6/26	0.088	6/27	0.085	5/19	**0.084**	9/12	0.083	9/6	3
1999	0.106	7/24	0.087	9/4	0.086	5/30	**0.086**	6/11	0.085	5/29	5
2000	0.088	8/15	0.087	6/9	0.085	6/8	**0.074**	8/30	0.072	6/1	3
2001	0.084	6/19	0.082	6/13	0.079	6/11	**0.079**	6/29	0.078	6/28	0
2002	0.116	6/24	0.111	7/16	0.101	6/22	**0.100**	6/23	0.096	7/18	15
(95-97 ave)							**0.095**				
(96-98 ave)							**0.089**				
(97-99 ave)							**0.088**				
(98-00 ave)							**0.081**				
(99-01 ave)							**0.079**				
(00-02 ave)							**0.084**				

South Bend/Elkhart Metropolitan Area
EIGHT HOUR OZONE AVERAGES (PPM)

St. Joseph County

Granger

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.102		0.101		0.1		**0.093**		0.085		9
1996	0.099		0.094		0.094		**0.091**		0.088		8
1997	0.108	7/26	0.101	7/17	0.093	6/29	**0.091**	5/24	0.091	6/28	7
1998	0.100	9/6	0.097	5/15	0.096	5/19	**0.095**	5/14	0.094	6/26	9
1999	0.091	9/2	0.089	9/4	0.088	6/11	**0.087**	5/30	0.087	6/10	8
2000	0.092	8/15	0.084	6/8	0.084	6/9	**0.078**	8/30	0.073	7/27	1
2001	0.092	6/19	0.090	6/13	0.089	7/9	**0.089**	8/7	0.086	6/27	6
2002	0.120	6/24	0.108	7/16	0.106	7/3	**0.104**	6/23	0.103	6/22	22
(95-97 ave)							**0.091**				
(96-98 ave)							**0.092**				
(97-99 ave)							**0.091**				
(98-00 ave)							**0.086**				
(99-01 ave)							**0.084**				
(00-02 ave)							**0.090**				

South Bend/Elkhart Metropolitan Area
EIGHT HOUR OZONE AVERAGES (PPM)

South Bend

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.103		0.095		0.095		**0.090**		0.085		5
1996	0.093		0.092		0.089		**0.087**		0.087		6
1997	0.105	7/26	0.098	7/17	0.091	5/24	**0.091**	6/29	0.089	6/28	6
1998	0.098	6/26	0.097	5/15	0.097	5/19	**0.088**	5/14	0.086	6/27	7
1999	0.095	7/24	0.095	9/2	0.094	6/22	**0.090**	6/10	0.090	6/11	9
2000	0.089	8/15	0.086	6/8	0.085	6/9	**0.081**	8/30	0.078	6/1	3
2001	0.094	6/19	0.092	6/13	0.090	8/7	**0.082**	8/8	0.081	8/27	3
2002	0.106	6/24	0.101	6/22	0.101	7/3	**0.100**	6/23	0.100	7/16	16
(95-97 ave)							**0.089**				
(96-98 ave)							**0.088**				
(97-99 ave)							**0.089**				
(98-00 ave)							**0.086**				
(99-01 ave)							**0.084**				
(00-02 ave)							**0.087**				

South Bend/Elkhart Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Potato Creek

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.106		0.102		0.102		**0.098**		0.091		8
1996	0.096		0.095		0.093		**0.092**		0.092		7
1997	0.094	7/17	0.088	5/24	0.086	6/28	**0.084**	6/29	0.081	7/12	3
1998	0.103	5/19	0.102	5/15	0.101	6/26	**0.090**	5/14	0.085	9/12	5
1999	0.093	6/22	0.090	9/2	0.089	7/24	**0.087**	6/10	0.087	9/4	10
2000	0.088	6/9	0.084	6/8	0.080	8/15	**0.079**	6/1	0.074	7/27	1
2001	0.090	6/19	0.088	6/13	0.080	7/9	**0.078**	6/18	0.077	6/14	2
2002	0.104	7/16	0.096	6/24	0.095	9/7	**0.092**	7/15	0.091	9/14	14
(95-97 ave)							**0.091**				
(96-98 ave)							**0.088**				
(97-99 ave)							**0.087**				
(99-01 ave)							**0.081**				
(00-02 ave)							**0.083**				

Elkhart County

Bristol

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.100		0.098		0.097		**0.090**		0.086		6
1996	0.105		0.097		0.095		**0.092**		0.090		8
1997	0.098	7/26	0.094	7/17	0.089	5/24	**0.089**	6/29	0.086	6/28	5
1998	0.101	6/26	0.089	9/12	0.083	6/27	**0.082**	5/14	0.082	7/14	2
1999	0.082	9/2	0.080	9/4	0.078	6/22	**0.077**	5/30	0.076	6/12	0
2000	0.078	6/9	0.076	6/8	0.072	6/1	**0.065**	7/27	0.063	8/23	0
2001	0.063	5/10	0.063	6/11	0.060	5/19	**0.056**	9/3	0.055	4/8	0
2002	0.111	6/24	0.103	6/22	0.102	6/23	**0.099**	7/7	0.094	9/8	18
(95-97 ave)							**0.090**				
(96-98 ave)							**0.087**				
(97-99 ave)							**0.082**				
(98-00 ave)							**0.074**				
(99-01 ave)							**0.066**				
(00-02 ave)							**0.073**				

South Bend/Elkhart Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Cass County, MI

Cassopolis

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.111		0.101		0.101		**0.100**		0.096		16
1996	0.106		0.099		0.096		**0.095**		0.095		12
1997	0.101	7/17	0.094	6/29	0.090	5/24	**0.090**	8/1	0.089	6/28	7
1998	0.102	5/19	0.098	5/15	0.094	7/13	**0.091**	9/13	0.090	9/12	7
1999	0.106	9/2	0.100	6/22	0.096	9/3	**0.095**	9/4	0.093	5/30	14
2000	0.092	8/15	0.09	6/8	0.089	6/9	**0.079**	7/27	0.078	6/1	3
2001	0.091	8/8	0.090	7/9	0.089	8/7	**0.088**	6/28	0.088	6/29	7
2002	0.116	6/24	0.106	6/22	0.103	6/23	**0.103**	9/7	0.097	7/8	24
(95-97 ave)							**0.095**				
(96-98 ave)							**0.092**				
(97-99 ave)							**0.092**				
(98-00 ave)							**0.088**				
(99-01 ave)							**0.087**				
(00-02 ave)							**0.090**				

Evansville Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Posey County

St Phillips

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1996	0.061		0.060		0.059		**0.058**		0.055		0
1997	0.096	7/12	0.090	6/23	0.089	7/18	**0.087**	6/27	0.084	5/23	4
1998	0.111	9/13	0.096	8/17	0.095	9/12	**0.092**	5/14	0.092	5/18	11
1999	0.105	9/4	0.104	9/2	0.098	9/3	**0.096**	9/5	0.093	6/10	15
2000	0.093	8/29	0.086	7/9	0.086	7/27	**0.086**	6/8	0.085	8/17	5
2001	0.080	6/18	0.080	6/19	0.079	5/10	**0.079**	6/12	0.078	5/9	0
2002	0.106	8/3	0.099	8/9	0.098	9/8	**0.097**	6/20	0.097	9/6	13
(95-97 ave)*							**0.072**				
(96-98 ave)							**0.079**				
(97-99 ave)							**0.091**				
(98-00 ave)							**0.091**				
(99-01 ave)							**0.087**				
(00-02 ave)							**0.087**				

* Site started 7-1-96

Vanderburgh County

Evansville - Mill Rd.

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.101		0.097		0.094		**0.094**		0.092		18
1996	0.100		0.098		0.093		**0.089**		0.087		8
1997	0.105	7/12	0.101	7/17	0.094	7/25	**0.093**	6/23	0.091	8/1	6
1998	0.111	9/13	0.102	9/12	0.099	5/14	**0.092**	5/18	0.092	8/17	8
1999	0.101	9/5	0.100	9/4	0.098	8/12	**0.098**	9/2	0.096	6/10	18
2000	0.085	8/29	0.083	7/9	0.083	7/27	**0.081**	8/17	0.080	6/4	1
2001	0.077	6/18	0.074	7/21	0.073	6/12	**0.073**	7/16	0.073	9/13	0
2002	0.105	8/13	0.102	7/8	0.096	8/9	**0.095**	7/5	0.094	6/21	16
(95-97 ave)							**0.092**				
(96-98 ave)							**0.091**				
(97-99 ave)							**0.094**				
(98-00 ave)							**0.090**				
(99-01 ave)							**0.084**				
(00-02 ave)							**0.083**				

Evansville Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Scott School

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.097		0.097		0.094		**0.094**		0.093		20
1996	0.104		0.098		0.096		**0.094**		0.093		12
1997	0.105	7/12	0.102	7/17	0.093	7/18	**0.089**	7/7	0.088	6/23	8
1998	0.107	9/13	0.099	5/14	0.098	8/17	**0.094**	9/12	0.091	8/21	10
1999	0.098	6/21	0.095	9/4	0.094	9/5	**0.091**	9/2	0.090	6/22	9
2000	0.077	6/1	0.076	7/27	0.075	6/4	**0.075**	7/9	0.074	6/8	0
2001	0.079	6/12	0.076	6/18	0.073	5/10	**0.072**	5/4	0.072	6/19	0
2002	0.097	7/8	0.095	8/3	0.089	7/15	**0.086**	6/21	0.086	7/6	5
(95-97 ave)							**0.092**				
(96-98 ave)							**0.092**				
(97-99 ave)							**0.091**				
(98-00 ave)							**0.086**				
(99-01 ave)							**0.079**				
(00-02 ave)							**0.077**				

Warrick County

Alcoa

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.105		0.090		0.090		**0.088**		0.087		8
1996	0.102		0.098		0.097		**0.094**		0.091		14
1997	0.095	8/1	0.094	7/18	0.091	7/12	**0.091**	8/2	0.090	7/17	7
1998	0.119	9/13	0.113	9/12	0.099	5/14	**0.096**	5/18	0.095	8/22	10
1999	0.101	9/5	0.098	9/4	0.096	6/22	**0.095**	8/12	0.090	9/3	5
2000	0.081	7/26	0.081	7/9	0.077	7/27	**0.077**	8/15	0.076	4/30	0
2001	0.087	6/12	0.082	6/18	0.081	6/19	**0.081**	9/13	0.078	8/2	1
2002	0.113	7/8	0.097	8/9	0.094	6/21	**0.094**	9/6	0.093	9/3	17
(95-97 ave)							**0.091**				
(96-98 ave)							**0.093**				
(97-99 ave)							**0.094**				
(98-00 ave)							**0.089**				
(99-01 ave)							**0.084**				
(00-02 ave)							**0.084**				

Evansville Metropolitan Area

EIGHT HOUR OZONE AVERAGES (PPM)

Boonville HS

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.106		0.098		0.091		**0.089**		0.087		9
1996	0.095		0.093		0.091		**0.090**		0.089		10
1997	0.109	7/17	0.098	7/12	0.097	7/18	**0.095**	8/2	0.094	7/21	9
1998	0.114	9/13	0.105	9/12	0.100	8/22	**0.091**	5/13	0.091	5/14	9
1999	0.092	6/21	0.091	9/5	0.088	6/22	**0.087**	9/2	0.085	8/12	5
2000	0.078	6/1	0.075	7/27	0.074	6/9	**0.073**	6/8	0.073	7/9	0
2001	0.091	6/12	0.081	6/19	0.079	6/18	**0.078**	9/13	0.074	6/10	1
2002	0.107	7/8	0.093	9/6	0.092	6/21	**0.091**	7/16	0.091	9/8	13
(95-97 ave)							**0.091**				
(96-98 ave)							**0.092**				
(97-99 ave)							**0.091**				
(98-00 ave)							**0.083**				
(99-01 ave)							**0.079**				
(00-02 ave)							**0.080**				

Tecumseh HS

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.108		0.108		0.096		**0.087**		0.086		10
1996	0.104		0.103		0.095		**0.094**		0.094		9
1997	0.108	7/17	0.097	7/18	0.095	8/1	**0.094**	7/12	0.089	6/24	10
1998	0.109	9/13	0.098	9/12	0.095	8/17	**0.093**	8/21	0.089	5/13	9
1999	0.098	6/21	0.096	9/5	0.094	9/2	**0.092**	6/22	0.092	9/4	11
2000	0.080	6/1	0.079	6/8	0.078	7/27	**0.077**	6/9	0.077	7/9	0
2001	0.087	6/12	0.077	6/18	0.076	9/13	**0.075**	6/10	0.075	6/19	1
2002	0.094	9/6	0.091	6/21	0.091	7/15	**0.090**	7/16	0.089	7/8	12
(95-97 ave)							**0.091**				
(96-98 ave)							**0.093**				
(97-99 ave)							**0.093**				
(98-00 ave)							**0.087**				
(99-01 ave)							**0.081**				
(00-02 ave)							**0.080**				

Terre Haute Metropolitan Area
EIGHT HOUR OZONE AVERAGES (PPM)

Vigo County

Terre Haute

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1995	0.091		0.087		0.087		**0.085**		0.084		4
1996	0.106		0.101		0.100		**0.099**		0.095		20
1997	0.099	7/12	0.087	7/17	0.087	7/20	**0.083**	6/28	0.083	8/1	3
1998	0.093	9/13	0.091	9/12	0.088	8/21	**0.084**	5/14	0.083	8/22	3
1999	0.091	9/5	0.087	9/2	0.086	6/22	**0.082**	5/29	0.082	6/10	3
2000	0.087	6/9	0.083	6/8	0.075	4/30	**0.075**	7/27	0.073	7/26	1
2001	0.090	6/18	0.085	6/13	0.083	6/19	**0.082**	5/5	0.081	7/16	2
2002	0.091	6/22	0.085	6/23	0.083	7/16	**0.082**	8/10	0.080	7/13	2
(95-97 ave)							**0.089**				
(96-98 ave)							**0.088**				
(97-99 ave)							**0.083**				
(98-00 ave)							**0.080**				
(99-01 ave)							**0.079**				
(00-02 ave)							**0.079**				

Vigo County

Sandcut

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2001	0.090	6/18	0.085	6/13	0.084	6/19	**0.083**	7/31	0.078	6/28	2
2002	0.104	6/21	0.104	6/22	0.101	8/10	**0.099**	9/7	0.093	7/16	8
(99-01 ave)*							**0.083**				
(00-02 ave)							**0.091**				

* Site started 01/04/01

Clark County

West Union, IL.

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2001	0.081	5/5	0.078	5/16	0.075	6/19	**0.074**	5/9	0.074	5/15	0
2002	0.093	6/22	0.091	6/21	0.089	8/10	**0.086**	7/16	0.086	8/3	6
(99-01 ave)*							**0.074**				
(00-02 ave)							**0.080**				

* Site started 01/04/01

Other Monitors

EIGHT HOUR OZONE AVERAGES (PPM)

Jackson County

Brownstown

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2000	0.091	6/1	0.091	6/9	0.09	6/8	**0.082**	9/19	0.081	5/31	3
2001	0.087	6/18	0.085	5/5	0.084	6/13	**0.084**	8/6	0.084	9/6	2
2002	0.093	6/21	0.092	6/22	0.091	8/10	**0.090**	8/3	0.088	8/9	9
(98-00 ave)							**0.082**				
(99-01 ave)							**0.083**				
(00-02 ave)							**0.085**				

Green County

Plummer

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2000	0.095	6/1	0.093	6/9	0.091	6/8	**0.090**	5/31	0.084	7/27	4
2001	0.092	6/13	0.091	6/18	0.087	6/19	**0.085**	5/4	0.085	5/5	5
2002	0.098	8/10	0.096	7/8	0.095	9/8	**0.094**	7/15	0.091	6/10	14
(98-00 ave)							**0.090**				
(99-01 ave)							**0.087**				
(00-02 ave)							**0.089**				

Carroll County

Flora

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
2001	0.087	6/13	0.081	6/19	0.081	9/6	**0.079**	5/6	0.079	6/28	1
2002	0.104	6/21	0.102	6/22	0.097	9/7	**0.096**	6/23	0.096	7/15	12
(99-01 ave)*							**0.079**				
(00-02 ave)							**0.087**				

* Site started 01/04/01

Industrial Monitors

EIGHT HOUR OZONE AVERAGES (PPM)

Lawrence County

Paoli

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
97	0.094	6/24	0.094	7/13	0.091	7/18	**0.087**	7/26	0.084	6/25	4
(95-97 ave)							**0.087**				

Perry County

AK Steel

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1998	0.106	9/13	0.104	9/5	0.104	9/12	**0.097**	8/22	0.090	8/5	15
1999	0.105	9/3	0.101	6/9	0.099	9/4	**0.095**	8/12	0.095	8/19	18
2000	0.094	6/9	0.093	7/27	0.092	8/30	**0.091**	6/1	0.090	8/14	6
2001	0.098	6/12	0.086	6/11	0.086	6/19	**0.086**	8/1	0.085	5/5	5
2002											
(96-98 ave)							**0.097**				
(97-99 ave)							**0.096**				
(98-00 ave)							**0.094**				
(99-01 ave)							**0.090**				
(00-02 ave)							**0.088**				

Industrial Monitors

EIGHT HOUR OZONE AVERAGES (PPM)

Gibson County

Toyota

Year	1st		2nd		3rd		4th		5th		Days => 0.085 ppm
1999	0.093	7/29	0.091	8/12	0.09	7/22	**0.089**	6/21	0.087	6/11	6
2000	0.074	6/1	0.071	6/8	0.070	6/9	**0.068**	3/5	0.068	5/31	0
2001	0.074	6/18	0.068	6/12	0.067	5/4	**0.067**	5/10	0.067	6/13	0
2002											
(97-99 ave)							**0.089**				
(98-00 ave)							**0.078**				
(99-01 ave)							**0.067**				
(00-02 ave)							**0.067**				

INDIANA OZONE 1-HOUR, 1995-2003

Last update: August 19, 2003

Louisville, KY Metropolitan Area
ONE HOUR OZONE VALUES (PPM)

Clark County

Charlestown

Year	1st	2nd	3rd	4th
1995	0.148	0.125	0.121	**0.113**
1996	0.109	0.098	0.097	**0.095**
1997	0.130	0.125	0.125	**0.115**
1998	0.156	0.140	0.138	**0.123**
1999	0.112	0.107	0.106	**0.103**
2000	0.105	0.101	0.101	**0.097**
2001	0.109	0.090	0.087	**0.083**
2002	0.123	0.117	0.115	**0.109**
2003	0.108	0.106	0.106	**0.101**
		4th High Value Over 3-Year Period		
(95-97)				**0.125**
(96-98)				**0.130**
(97-99)				**0.130**
(98-00)				**0.123**
(99-01)				**0.106**
(00-02)				**0.109**
(01-03)				**0.109**

INDIANA OZONE 1-HOUR, 1995-2003

Last update: August 19, 2003

Louisville, KY Metropolitan Area

ONE HOUR OZONE VALUES (PPM)

Floyd County

New Albany

Year	1st	2nd	3rd	4th
1995	0.125	0.115	0.110	**0.108**
1996	0.126	0.119	0.115	**0.108**
1997	0.126	0.127	0.101	**0.097**
1998	0.145	0.131	0.118	**0.112**
1999	0.120	0.120	0.116	**0.115**
2000	0.101	0.093	0.092	**0.092**
2001	0.088	0.083	0.083	**0.083**
2002	0.120	0.118	0.112	**0.109**
2003	0.123	0.116	0.116	**0.101**
		4th High Value Over 3-Year Period		
(95-97)				**0.125**
(96-98)				**0.126**
(97-99)				**0.126**
(98-00)				**0.120**
(99-01)				**0.115**
(00-02)				**0.109**
(01-03)				**0.116**

CENTRAL INDIANA AIR QUALITY ADVISORY GROUP MEMBERS	
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Andrew Knott	Hoosier Environmental Council
Ann McIver	Citizens Thermal Energy
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Bernie Paul	Indianapolis Air Pollution Control Board
Betsy Swearingen	Johnson County Health Department
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Dan Theobald	Shelby County Development Corp.
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Jeff Quyle	Morgan County Board of Commissioners
Jeffrey Colvin	City of Greenwood
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Jennifer Tryon	Central Indiana Regional Community League
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Jim Brainard	Town of Carmel
Jim Culotta	Town of Fishers
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Katie Culp	Boone County Economic Development Corp.
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Leo Carroll	Environmental Testing Systems
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